# Acer TravelMate C300 Series

Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to <a href="http://csd.acer.com.tw">http://csd.acer.com.tw</a>

SERVICE CD PART NO.: VD.T28V1.001

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# **Revision History**

Please refer to the table below for the updates made on TravelMate C300 service guide.

Date	Chapter	Updates	
2003/10/28	Chapter 1	Delete introduction to front panel on page 8.	
2003/11/17	Chapter 4	Add POST codes	
2003/12/18	Chapter 3	p. 54 and p. 64 Add hinge caps disassembling and reassembling SOP	
2003/12/24	Chapter 3	p.56 Add a note	
2004/01/09	Chapter 6	Revise spare part description. LCD bezel and LCD panel are without wireless antenna.	
2004/03/12	Chapter 2	p.40 Revise BIOS Advanced menu display and settings.	
2004/03/17	Chapter 1	p.25 Correct card reader spec.	
2004/04/27	Chapter 2	p.38 Correct VGA memory size displaying on BIOS screen. p.39 Add a note on VGA memory size	

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## **Conventions**

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

### **Preface**

Before using this information and the product it supports, please read the following general information.

- 1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
- 2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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# **System Specifications**

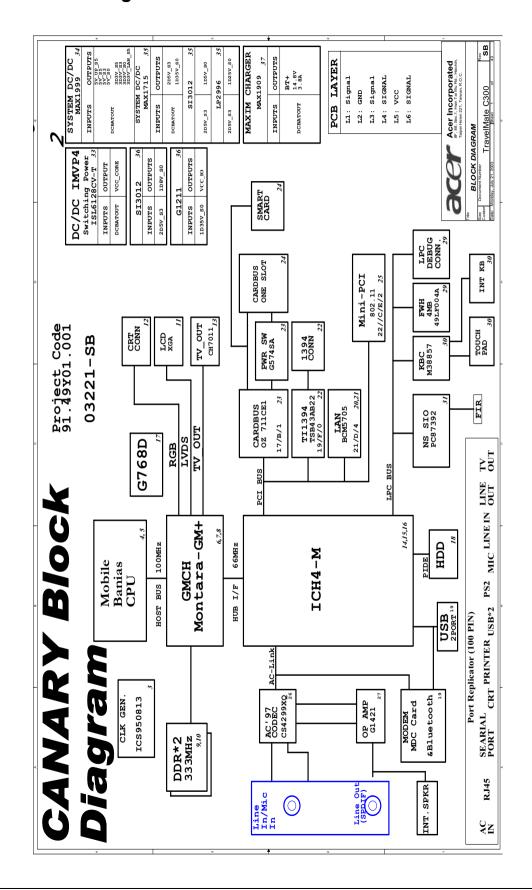
# **Features**

This computer was designed with the user in mind. Here are just a few of its many features:

Performa	ance	
		Intel <sup>®</sup> Pentium <sup>®</sup> M processor with 1MB L2 cache
		Intel® 855GM chipset
		CD ROM, DVD, DVD/CD-RW combo, DVD or DVD-dual drive
		High-capacity Enhanced-IDE hard disk
		Advanced Configuration Power Interface (ACPI) power management system
Display		
,		14.1" Thin-Film Transistor (TFT) liquid-crystal display (LCD) supporting pen-based input, with 16M color at 1024X768 XGA (eXtended Graphics Array) resolution
		3D capabilities
		Simultaneous LCD and CRT display support
		Dual display capability
		Supports other output display devices such as LCD projection panels for large-audience presentations
		Light Sensing background luminance detection - panel automatically adjusts screen brightness
		S-video for output to a television or display device that supports S-video input
		"Automatic LCD dim" feature that automatically decides the best settings for your display and conserves power
Multime	dia	
		16-bit high-fidelity AC'97 stereo audio with 3D sound and wavetable synthesizer
		Built-in stereo speakers
		High-speed CD, DVD, DVD/CD-RW combo or DVD or DVD dual drive
Connect	ivity	
	٦	High-speed fax/data modem port
		10/100/1000 t-based Gigabit Ethernet port
		USB (Universal Serial Bus) 2.0 ports
		IEEE 1394 port
		802.11b, 802.11a+b wireless LAN options
		Bluetooth option
Keyboar	d an	d Pointing Device
		Sleek, smooth and stylish design
		Full-sized keyboard
		Ergonomically-centered touchpad pointing device
		Rotating/folding screen for Tablet PC functionality

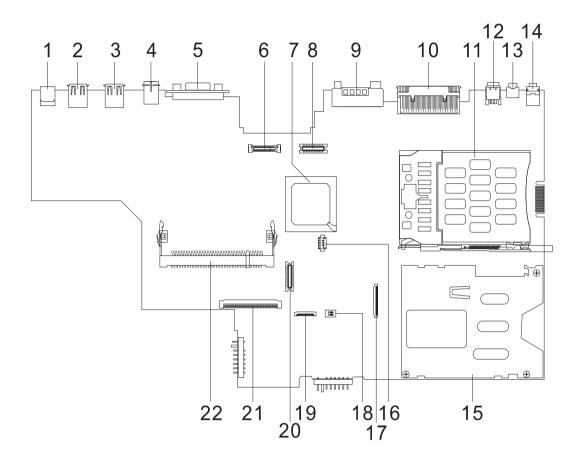
Expansion	
	One Type II CardBus PC Card slot
	Upgradeable memory
	AcerMedia bay
	Acer EasyPort II
I/O Ports	
	One Card bus type II card slot
	One smart-card slot
	One RJ-11 phone jack (V.90/92, 56Kbps modem)
	One RJ-45 jack (Gigabit Ethernet)
	One DC-in jack for AC adapter
	One external monitor (VGA) port
	One S-video TV out port
	One 100-pin port replicator connector
	One line-out (headphone) jack (3.5mm mini jack)
	One line-in (microphone) jack (3.5mm mini jack)
	One microphone-in jack
	Two USB 2.0 ports
	One 4-pin IEEE 1394 port
	One FIR port (IrDA)

## System Block Diagram



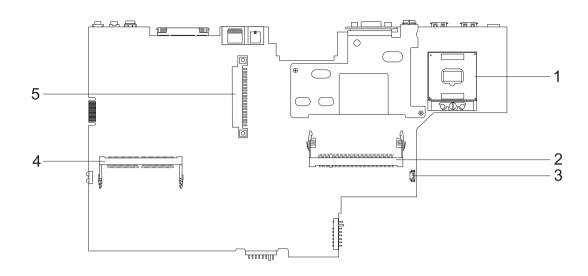
# **Board Layout**

# Top View



1	DC-In Jack	12	IEEE 1394 Port
2	USB Port	13	Line-Out Jack
3	USB Port	14	Mic-In Jack
4	S-Vedio Port	15	Smart Card Reader Slot
5	External Display Port	16	RTC Battery Connector
6	LCD Coaxial Cable Connector	17	Smart Card Connector
7	South Bridge	18	SW2
8	Inverter Cable Connector	19	Touchpad Connector
9	Modem Jack/LAN Jack	20	MDC Board Connector
10	Expansion Port	21	Keyboard Connector
11	PCMCIA Slot	22	DIMM Socket 2

## **Bottom View**



- 1 CPU Socket
- 2 DIMM Socket 1
- 3 FAN Connector

- 4 Mini PCI Connector
- 5 HDD Connector

## **Outlook View**

A general introduction of ports allow you to connect peripheral devices, as you would with a desktop PC.

## **Front View**



#	Icon	Item	Description
1		EMR stylus	Electromagnetic resonate (EMR) stylus is used to input data in tablet mode. Use only an EMR-compatible stylus to input data on the screeen.
2		Display screen	Also called LCD (liquid-crystal display), displays computer output.
3		Tablet Keys	Add enhanced functionality when operating in Tablet mode.
4		Launch Keys	Buttons for launching frequently used programs.
5		Palmrest	Comfortable support area for your hands when you use the computer.
6		Click buttons (left, center and right)	The left and right buttons function like the left and right mouse buttons; the center button serves as a 4-way scroll button.
7		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8		Keyboard	Inputs data into your computer.

9	Status indicator	LEDs (light-emitting diodes) that turn on
		and off to show the status of the computer,
		its functions and component.

# Left view



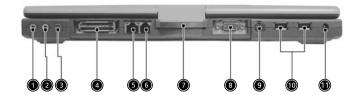
#	Icon	Item	Description
1		Security keylock	Connects to a Kensington-compatible computer security lock.
2		Power switch	Turns on the computer power.
3		Ventilation slot	Allows air to circulate through the computer chassis.
4		AcerMedia Bay	For hot-swappable modules including DVD-ROM, DVD/CD-RW combo or DVD dual drive.
5		LED indicator	Lights up when the optical drive is active.
6		Eject button	Ejects the optical drive tray from the drive.
7	C	Emergency eject slot	Ejects the optical drive tray when the computer is turned off.
8	<b>ر</b> ها	Pen slot	Keeps the stylus handy when not in use.

# Right view



#	lcon	Item	Description
1		Smart Card slot	Slot for Smart Card interface with pre-boot authentication system.
2		Infrared port	Interfaces with infrared devices (e.g., infrared printer, IR-aware computer).
3		PC Card eject button	Ejects the PC Card from the slot.
4		PC Card slot	Accepts one Type II 16-bit PC Card or 32-bit CardBus PC Card.

## **Rear Panel**



#	Icon	Item	Description
1	(( <sub>1</sub> ))	Line-in/Mic-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman).
2	(r <sup>1</sup> ))	Speaker/Line-out Headphone jack	Connects to audio line-out devices (e.g., speakers, headphones).
3		IEEE 1394 port	Connects to IEEE 1394 devices.
4		Expansion port	Connects to an I/O port replicator or Acer EasyPort port expansion device.
5	<del>2</del> 25	Network jack	Connects to a 10/100/1000 t-based Gigabit Ethernet network.
6	O	Modem jack	Connects to phone line.
7		Convertible hinge	Hinges the LCD screen in place when switching from PC mode to tablet mode and vice versa.
8		External display	Connects to a display device (e.g., external monitor, LCD projector).
9		S-video	Connects to a television or display device with S-video input.
10	•	USB 2.0 ports (2)	Connects to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).
11		Power jack	Connects to an AC adapter.

## **Bottom Panel**



#	lcon	Item	Description
1		AcerMedia Bay release latch	Unlatches the AcerMedia drive for removing or swapping.
2		AcerMedia Bay	Houses an AcerMedia drive module.
3		Cooling fans	Help keep the computer cool.
			<b>Note</b> : Don't cover or obstruct the opening of the fans.
4		Memory compartment	Houses the computer's main memory.
5		Hard disk protector	Protects the hard disk from accidental dumps and vibration.
6		Hard disk bay	Houses the computers Hard disk drive.
7		Battery Lock & release latch	Unlock and unlatches the battery to remove the battery pack.
8		Battery bay	Houses the computer's battery pack.

## **Indicators**

The computer has seven easy-to-read status icons below the display screen.



The status LCD displays icons that show the status of the computer and its components.

Icon	Function	Description
Ö	Wireless communication	Lights orange when the Wireless LAN capabilities are enabled.
*	Bluetooth	Lights when the Bluetooth is enabled or a Bluetooth enabled device is within range.
Ē	Power	Lights when the computer is on.
Z²	Sleep	Lights when the computer enters Standby mode and blinks when it enters into or resumes from hibernation mode.
<b>*</b>	Media Activity	Lights when the floppy drive, hard disk or optical drive is active.
Ð	Battery Charge	Lights when the battery is being charged.
A	Caps lock	Lights when Caps Lock is activated.

lcon	Function	Description
	Num loc	Lights when Num Lock is activated.
a		

# Lock Keys

The keyboard has three lock keys which you can toggle on and off.



Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num lock (Fn-F11)	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad.
Scroll lock (Fn-F12)	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

# **Embedded Numeric Keypad**

The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the keycaps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.



Desired Access	Num Lock On	Num Lock Off
Number keys on embedded keypad	Type numbers in a normal manner.	
Cursor-control keys on embedded keypad	Hold while using cursor-control keys.	Hold Fn while using cursor- control keys.
Main keyboard keys	Hold Fn while typing letters on embedded keypad.	Type the letters in a normal manner.

**NOTE:** If an external keyboard or keypad is connected to the computer, the Num Lock feature automatically shifts from the internal keyboard to the external keyboard or keypad.

# **Windows Keys**

The keyboard has two keys that perform Windows-specific functions.

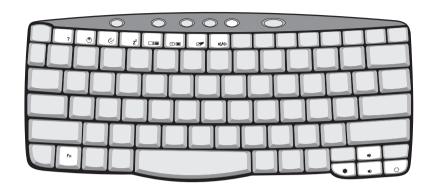


Key	Icon	Description		
Windows logo key	**	Start button. Combinations with this key perform shortcut functions. Below are a few examples:  + Tab (Activates next taskbar button)  + E (Explores My Computer)  + F (Finds Document)  + M (Minimizes All)  Shift + M (Undoes Minimize All)  + R (Displays the Run dialog box)		
Application key		Opens a context menu (same as a right-click).		

# **Hot Keys**

The computer uses hotkey or key combinations to access most of the computer's controls like sreen brightness, volume output.

To activate hot keys, press and hold the **Fn** key before pressing the other key in the hot key combination.



Hot Key	Icon	Function	Description
Fn-F1		Hot key help	Displays help on hot keys.
	?		
Fn-F2	-	System Property	Displays the System Property.
FII-FZ		System Property	Displays the System Property.
	8		
Fn-F3	¢/s	Power Options	Display the Power Options Properties used by the computer (function available if supported by operating system).
			See "Power management" on page 25.
Fn-F4		Sleep	Puts the computer in Sleep mode.
	Z <sup>z</sup>		See "Power management" on page 25.
Fn-F5		Display toggle	Switches display output between the display screen, external monitor (if connected) and both the display screen and external monitor.
Fn-F6	*•	Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn-F7		Touchpad toggle	Turns the internal touchpad on and off.
Fn-F8	<b>ದ/4</b> ≫	Speaker toggle	Turns the speakers on and off.
Fn-⊕	1)	Volume up	Increases the speaker volume.

Hot Key	Icon	Function	Description
Fn-↓	<b>(</b> )	Volume down	Decreases the speaker volume.
Fn-∌	÷.	Brightness up Increases the screen brightness.	
Fn-€	<b></b>	Brightness down	Decreases the screen brightness
Fn-PgUp	Pg Up Home	Home	Functions as the "Home" key.
Fn-PgDn	Pg Dn End	End	Functions as the "End" key.
Alt Gr-Euro	€	Euro	Types the Euro symbol.

## The Euro Symbol

If your keyboard layout is set to United States-International or United Kingdom or if you have a keyboard with a European layout, you can type the Euro symbol on your keyboard.

**NOTE:** For US keyboard users: The keyboard layout is set when you first set up Windows. For the Euro symbol to work, the keyboard layout has to be set to United States-International.

To verify the keyboard type:

- 1. Click on Start, Control Panel.
- 2. Double-click on Regional and Language Options.
- 3. Click on the Language tab and click on Details.
- **4.** Verify that keyboard layout used for "En English (United States)" is set to United States-International. If not, select and click on **ADD**; then select **United States-International** and click on **OK**.
- 5. Click on OK.

To type the Euro symbol:

- 1. Locate the Euro symbol on your keyboard.
- 2. Open a text editor or word processor.
- 3. Hold Alt Gr and press the Euro symbol.

**NOTE:** Some fonts and software do not support the Euro symbol. Please refer to <a href="https://www.microsoft.com/typography/faq/faq12.htm">www.microsoft.com/typography/faq/faq12.htm</a> for more information.

# **Launch Keys**

Located at the top of keyboard are five buttons. These buttons are called launch keys. They are designated as the mail button, the web browser button and two programmable buttons (P1 and P2).



No.	Launch Key	Default application
1	Wireless LAN (optional)	Activate wirelss LAN for wireless communication
2	Bluetooth (optional)	Activate Bluetooth for wireless communication.
3	P1	User-programmable
4	P2	User-programmable
5	Email	Email application
6	Web browser	Internet browser application

**CAUTION:** It's important that Wireless LAN and Bluetooth is turned off before boarding an airplane.

## **Touchpad**

The built-in touchpad is a pointing device that senses movement on its surface. This means the cursor responds as you move your finger on the surface of the touchpad. The central location on the palmrest provides optimal comfort and support.



NOTE: If you are using an external USB mouse, you can press Fn-F7 to disable the touchpad.

### **Touchpad Basics**

The following teaches you how to use the touchpad:



- ☐ Move your finger across the touchpad to move the cursor.
- Press the left (1) and right (3) buttons located on the edge of the touchpad to do selection and execution functions. These two buttons are similar to the left and right buttons on a mouse.
   Tapping on the touchpad produces similar results.
- Use the 4-way scroll (2) button to scroll up or down and move left or right a page. This button mimics your cursor pressing on the right scroll bar of Windows applications.

Function	Left Button	Right Button	Scroll Button	Тар
Execute	Click twice quickly			Tap twice (at the same speed as double-clicking the mouse button)
Select	Click once			Tap once

Function	Left Button	Right Button	Scroll Button	Тар
Drag	Click and hold, then use finger to drag the cursor on the touchpad			Tap twice (at the same speed as double-clicking a mouse button) then hold finger to the touchpad on the second tap to drag the cursor
Access context menu		Click once		
Scroll			Click and hold the button in the desired direction (up/ down/left/right)	

**NOTE:** Keep your fingers dry and clean when using the touchpad. Also keep the touchpad dry and clean. The touchpad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Tapping too hard will not increase the touchpad's responsiveness.

# **Hardware Specifications and Configurations**

### Processor

Item	Specification
CPU type	Intel ® Pentium ® M at 1.4Ghz ~1.7Ghz or higher
CPU package	/μ-FCPGA package
CPU core voltage	0.95V - 1.42V

### BIOS

ltem	Specification
BIOS vendor	Phoenix
BIOS Version	V1.00
BIOS ROM type	Flash ROM
BIOS ROM size	512KB
BIOS package	TSOP
Supported protocols	ACPI 1.0b,PC Card 95, SM BIOS 2.3, EPP/IEEE 1284, ECP/IEEE 1284 1.7 & 1.9, PCI 2.2, PnP 1.0a, DMI 2.0, PS/2 keyboard and mouse, USB 2.0, VGA BIOS, CD-ROM bootable, IEEE 1394
BIOS password control	Set by setup manual

#### **Second Level Cache**

Item	Specification
Cache controller	Built-in CPU
Cache size	1MB
1st level cache control	Always enabled
2st level cache control	Always enabled
Cache scheme control	Fixed in write-back

### **System Memory**

Item	Specification
Memory controller	Intel Montara GM+ and ICH4-M
Memory size	0MB (no on-board memory)
DIMM socket number	2 sockets
Supports memory size per socket	256MB, 512MB and 1024MB
Supports maximum memory size	2048MB (by two 1024MB DDR RAM module)
Supports DIMM type	DDR RAM
Supports DIMM Speed	333 MHz
Supports DIMM voltage	2.5V
Supports DIMM package	200-pin soDIMM
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

### **Memory Combinations**

Slot 1	Slot 2	Total Memory
0MB	256MB	256MB
ОМВ	512MB	512MB
ОМВ	1024MB	1024MB
256MB	0MB	256MB
256MB	256MB	512MB
256MB	512MB	768MB
256MB	1024MB	1280MB
512MB	0MB	512MB
512MB	256MB	768MB
512MB	512MB	1024MB
512MB	1024MB	1536MB
1024MB	0MB	1024MB
1024MB	256MB	1280MB
1024MB	512MB	1536MB
1024MB	1024MB	2048MB

**NOTE:** Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations. On above table, the configuration of slot 1 and slot 2 could be reversed.

### **Modem Interface**

Item	Specification
Data modem data baud rate (bps)	56K
Supports modem protocol	V90/V92 MDC
Modem connector type	RJ11
Modem connector location	Rear panel

#### **LAN Interface**

Item	Specification
Chipset	Broad Com 5705
Supports LAN protocol	10/100/1000 Mbps
LAN connector type	RJ45
LAN connector location	Rear panel

#### **Bluetooth-MODEM Interface**

Item	Specification	
Chipset	CSR BC02/Agere Scorpio solution	
Data throughput	200k bps (Blue-tooth)/56K bps (MODEM)	
Protocol	Blue-tooth 1.1	
Interface	USB 1.1+MDC	
Connector type	RJ11 (MODEM)	

#### Wireless Module 802.11b

Item	Specification
Chipset	Intel Claxico

### Wireless Module 802.11b

Item	Specification
Data throughput	up to 11M bps
Protocol	802.11b
Interface	Mini-PCI type II
Connector interface	124-pin SO-DIMM edge connector

### Four-in-One Card Reader

Item	Specification	
Chipset	OZ711EC1	
Data throughput	USB 1.1	
Protocol	Secure Digital (SD), SmartMedia, MultiMediaCard, Memory Stick	

### **Hard Disk Drive Interface**

Item	Specification			
Vendor & Model Name	HGST IC25N030ATMR04 TOSHIBA MK3021GAS	HGST IC25N040ATMR04 TOSHIBA MK4021GAS	HGST IC25N060ATMR04 HGST TS548060M9AT00 TOSHIBA MK6021GAS	HGST IC25N080ATMR04 TOSHIBA MK8025GAS KA023A
Capacity (GB)	30	40	60	80
Bytes per sector	512	512	512	512
Data heads	2	2/3	3/4 for Toshiba	4
Logical heads	16	16	16	16
Logical sectors	63	63	63	63
Drive Format			•	
Disks	1	1/2	2/3 for Toshiba	2
Logical cylinders	16383	16383	16383	16383
Spindle speed (RPM)	4200 RPM	4200 RPM	4200 RPM/5400 RPM for HGST TS548060M9AT00	5400 RPM/4200 RPM for Toshiba
Performance Sp	pecifications			
Buffer size	2MB	2MB	8MB/2MB for Toshiba	8MB
AT Interface	ATA/ATAPI-6 ATA-5 for Toshiba	ATA/ATAPI-6 ATA-5 for Toshiba	ATA/ATAPI-6 ATA-5 for Toshiba	ATA/ATAPI-6
Data transfer rate (buffer to/ from media Mbytes/s)	350	350	350/450	350
Data transfer rate (host~buffer, Mbytes/s)	100 MB/Sec. Ultra DMA mode-5	100 MB/Sec. Ultra DMA mode-5	100 MB/Sec. Ultra DMA mode-5	100 MB/Sec. Ultra DMA mode-5
DC Power Requ	DC Power Requirements			
Voltage tolerance	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%

### **DVD/CDRW Interface**

Item	Specification		
Vendor & model name	DVD/CDRW COMBO MODULE QSI SBW-242 DVD/CDRW COMBO MODULE SONY CRX830E C		
Performance Specification	With CD Diskette With DVD Diskette		
Transfer rate (KB/sec)	Sustained: Max 3.6Mbytes/sec	Sustained: Max 10.8Mbytes/sec	
Data Buffer Capacity	128 KBytes		
Interface	IDE/ATAPI (ATA/ATAPI-5)		
Applicable disc format (for SONY)	DVD: DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD+R, DVD-RW, DVD+RW,		
	CD: CD Digital Audio and CD Extra, CD-ROM (mode 1), CD-ROM XA (Mode 2, Form 1 and Form 2) and CD-I Ready and CD-I Bridge, Photo CD, (Single and Multi session), Video CD, CD-TEXT, CD-R, CD-RW, CD Layer of Hybrid SACD		
Applicable disc format (for QSI)	DVD: DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM (optional) CD: CD-DA, CD-ROM/XA, CD-i, Karaoke CD, Video CD, Multisession Photo CD, Enhanced CD, itrax CD, CD extra, CD Plus, CD-Text, CD-R and CD-RW discs		
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release		
Power Requirement			
Input Voltage	5 V +/- 5 % (Operating)		

### **DVD-RW Interface**

Item	Specification	
Vendor & model name	DVD-RW MODULE PIONEER DVR-K12D	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained:	Sustained:
	Max 3.6Mbytes/sec	Max 10.8Mbytes/sec
Data Buffer Capacity	128 KBytes	
ATAPI Interface	SFF-8020i, SFF8090 Ver5	
Applicable disc format	Supports KODAK Photo CD single and Multi-session Supports CD Extra (CD PLUS) Supports Mixed CD Supports Video CD Supports to read/write CD-R discs Supports to read/write CD-RW discs Supports CD text data read/write Supports to read DVD-ROM Supports to read/write DVD-R Ver. 2.00 for General Supports to read/write DVD-RW Ver.1.0 & 1.1	
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release	
Power Requirement		
Input Voltage	5 V +/- 5 % (Operating)	

### **DVD** Interface

Item	Specifi	cation
Vendor & model name	DVD-ROM MODULE MKE SR8177	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained: Max 3.6Mbytes/sec	Sustained: Max 11.08Mbytes/sec
Data Buffer Capacity	256 KBytes	
ATAPI Interface	SFF8090 Ver 0.99	
Applicable disc format	DVD: DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R (3.95G/4.7G), DVD-RW, DVD-RAM (2.6G/4.7G) CD: CD-Audio, CD-ROM (mode 1 and mode 2), CD-ROM XA (mode 2, form 1 and form 2), CD-I (mode 2, form 1 and form 2), CD-I Ready, CD-I Bridge, CD-WO, CD-RW, Photo CD, Video CD, Enhanced Music CD (CD Plus), CD-TEXT	
Loading mechanism	Load: Manual Release: (a) Electrical Release (Release Button) (b) Release by ATAPI command (c) Emergency Release	
Power Requirement		
Input Voltage	5 V +/- 5 % (Operating)	

### Speaker

Item	Specification
Number of speaker	2
Rating	1W, max; 4 ohm
Connector type	Headphone out, microphone in and line-in

### Video Interface

Item	Specification
Chipset	Montara GM+ intergrated (UMA)
Interface	Integration
Supports ZV (Zoomed Video) port	No
Maximum resolution LCD	1600X1200 (UXGA)
Maximum resolution CRT	2048X1536@75HZ

### **Audio Interface**

Item	Specification
Audio Controller	Intel ICH4-M intergrated
Audio Codec	Cirrus 4299XQ
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	20 bit stereo Digital to analog converter 18 bit stereo Analog to Ditial converter
Compatibility	AC97
Mixed sound source	Line-in, CD

### **Audio Interface**

Item	Specification
Voice channel	8/16-bit, mono/stereo
Sampling rate	44,1 KHz (48K byte for AC97 interface)
Internal microphone	Yes
Internal speaker / Quantity	Yes/2
Supports PnP IRQ	IRQ10

## Video Resolutions Mode (for both LCD and CRT)

Resolution	16 bits (High color)	32 bits (True color)
480x600	Yes	Yes
800x600	Yes	Yes
1024x768	Yes	Yes
1152x864	Yes	Yes
1280x1024	Yes	Yes
1400x1050 (SXGA+panel only)	Yes	Yes

### **Video Memory**

Item	Specification
Fixed or Upgradeable	Fixed
Vendor	Intel
Memory size	Default 16M (Adjust via BIOS)
Interface	DDR

### **Parallel Port**

Item	Specification
Parallel port controller	ICH4-M
Number of parallel port	1
Location	Rear side
Connector type	25-pin D-SUB
Parallel port function control	Enable/Disable/Auto (BIOS or operating system chooses configuration) by BIOS Setup  Note: Depending on your operating system, disabling an unused device may help free system resources for other devices.
Supports ECP/EPP/Bi-directional/Output only (PS/2 compatible)	Yes (set by BIOS setup)  Note: When Mode is selected as EPP mode, "3BCh" will not be available.
Optional ECP DMA channel (in BIOS Setup)	DMA channel 3
Optional parallel port I/O address (in BIOS Setup)	378h, 278h, 3BCH
Optional parallel port IRQ (in BIOS Setup)	IRQ7, IRQ5

#### **USB Port**

Item	Specification
Chipset	ICH4-M intergrated
USB Compliancy Level	2.0
OHCI	USB 2.0
Number of USB port	2
Location	Rear side
Serial port function control	Enable/Disable by BIOS Setup

#### IEEE 1394 Port

Item	Specification
Chipset	TI TSAB43AB22
InterfaceUSB Compliancy Level	IEEE 1394 1.0
Number of IEEE 1394 port	1
Location	Rear side
Connector type	IEEE 1394

#### **PCMCIA Port**

Item	Specification
PCMCIA controller	OZ 711EC1
Supports card type	Type-II
Number of slots	One type-II
Access location	Right panel
Supports ZV (Zoomed Video) port	No ZV support
Supports 32 bit CardBus	Yes (IRQ10)

## **System Board Major Chips**

Item	Controller
Core logic	Intel Montara GM+ and ICH4-m
VGA	Montara GM+ intergrated (UMA)
LAN	Broad Com 5705
IEEE 1394	TI TSAB43AB22
USB 2.0	ICH4-M intergrated
Super I/O controller	PC 87392
MODEM	Intel Montara GM+ and ICH4-M
Blue tooth	CSR BC02/Agere Scorpio solution
Wireless 802.11 b	Intel Claxico
PCMCIA	OZ 711EC1
Audio	Intel ICH4-M intergrated/Audio Codec: Cirrus 4299XQ
Five-in-one card reader	OZ711EC1
Touchpad	M38857

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## Keyboard

Item	Specification
Keyboard controller	M38857
Keyboard vendor & model name	DARFON
Total number of keypads	84/85/88
Windows logo key	Yes
Internal & external keyboard work simultaneously	No Note: Internal and external keyboard can not work simultaneously by software specification.

## Battery

Item	Specification
Vendor & model name	SANYO
Battery Type	Li-ion
Pack capacity	4400 Ah
Cell voltage	3.7V/cell
Number of battery cell	8
Package configuration	4 cells in series, 2 series in parallel
Package voltage	14.8V

### LCD

Item	Specification	
Vendor & model name	AU B141XG08 CHIME N141X9-L01	
Mechanical Specificat	ions	
LCD display area (diagonal, inch)	14.1	
Display technology	TFT	
Resolution	XGA (1024x768)	
Supports colors	262K	
Optical Specification		
Brightness control	keyboard hotkey	
Contrast control	No	
Typical White Luminance	200 (5 points average) 180 for CHIME	
Contrast ratio	300 (Min.), 500 (Typ.) for CHIME	
	250 (Min.), 300 (Typ.) for AU	
Response time (msec)	TR: 6 (Typ.), 10 (Max.) TF: 17 (Typ.), 25 (Max.) for CHIME	
	25 (Typ.) for AU	
Electrical Specification	n	
Supply voltage for LCD display (V)	3.0 (Min.), 3.3 (Typ.), 3.6 (Max.)	

#### LCD Inverter

Item	Specification
Vendor & model name	Ambit
Brightness conditions	Vadj=3.3V
Input voltage (V)	7 (Min.), 14 (Max.)
Input current (A)	0.6 (Min.)
Output voltage (V, rms)	650
Output current (mA, rms)	5.5~6.5
Output voltage frequency (k Hz)	40~60 Hz

### AC Adaptor

Item	Specification	
Model number	DELTA ADP-65DB 17V 70W (3 PIN)	
AC input	90~264V, 47Hz to 63Hz	
Output power	65W, 19V@3.42V	

### **System Power Management**

ACPI mode	Power Management	
Mech. Off (G3)	All devices in the system are turned off completely.	
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.	
Working (G0/S0)	Individual devices such as the CPU and hard disk may be power managed in this state.	
Suspend to RAM (S3)	CPU set power down VGA Suspend PCMCIA Suspend	

### **Memory Address Map**

Memory Address	Size	Function
00100000h-000F0000h	512 KB	System BIOS
000CFFFFh-000C0000h		VGA BIOS
00009FFFFh-00000000h	640KB	Conventional memory

## I/O Address Map

I/O Address	Function
0000-001F, 0081-008F, 0090-0091, 0093-009F, 00C0-00DF, 040B, 04D6	DMA controller
0D00-FFFF	PCI bus
0020-0021, 0024-0025, 0028-0029, 002C-002D, 0030-0031, 0034-0035, 0038-0039, 003C-003D, 00A0-00A1, 00A4-00A5, 00A8-00A9, 00AC-00AD, 00B0-00B1, 00B4-00B5, 00B8-00B9, 00BC-00BD, 00C0-00DF	Programmable interrupt controller
0040-0043, 0050-0053	System timer
0060, 0064	Acer Tablet PC Keyboard Buttons (101/102 key)

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#### I/O Address Map

I/O Address	Function
002E-002F, 004E-004F, 0061, 0063, 0065, 0067, 0080, 0092, 00B2-00B3, 0200-020F, 0600-060F, 0700-070F, 0800-080F, 1000-107F, 1180-11BF,	Main board resources
0066	Microsoft ACPI-Compliant Embedded Controller
0070-0077	System CMOS/real time clock
00F0	Numeric data processor
0170-0177, 0376	Secondary IDE Channel
01F0-01F7, 03F6	Primary IDE Channel
0274-0277, 0279, 0A79,	ISAPNP Read Data Port
0378-037F, 0778-077B	Printer Port (LPT1)
03B0-03BB, 03C0-03DF, 1800-1807,	Intel (R) 82852/82855 GM/GME Graphics Controller
06F8-06FF	Wacom Serial Pen Tablet
1810-181F	Intel (R) 82801DBM Ultra ATA Storage Controller-24CA
1820-183F	Intel (R) 82801DB/DBM USB Universal Host Controller-24C2
1840-185F	Intel (R) 82801DB/DBM USB Universal Host Controller-24C4
1860-187F	Intel (R) 82801DB/DBM USB Universal Host Controller-24C7
1880-189F	Intel (R) 82801DB/DBM SMBus Controller-24C3
18C0-18FF, 1C00-1CFF	Cystal WDM AC97 Driver for ICH4
2000-207F, 2400-24FF	Agere System AC97 Modem
FB00-FBFE	O2Micro SmartCardBus Reader
FC00-FCFF, FD00-FDFF, FE00- FEFF, FF00-FFFF	Generic Cardbus Controller

#### **IRQ** Assignment Map

Interrupt Channel	System timer
IRQ00	System time
IRQ01	Keyboard
IRQ02	Progammable Interrupt Controller
IRQ03	FIR
IRQ04	Communications Port (COM1)
IRQ05	Free
IRQ06	Wacom Serial Pen Tablet/Standard Floppy Disk Controller
IRQ07	ECP Printer Port (LPT1)/O2Micro Smart CardBus Reader
IRQ08	Real Time Clock
IRQ09	SCI
IRQ10	PCI Device (LAN, Audio, Modem)
IRQ11	USB 1.1, USB 2.0, VGA
IRQ12	PS/2 Mouse
IRQ13	Numeric data processor
IRQ14	1st EIDE device (hard disk)
IRQ15	2nd EIDE device (optical drive)

### **DMA Channel Assignment**

Item	Specification
00	PnP Audio System CODEC
01	Free
02	Standard Floppy Disck Controller
03	ECP Printer Port

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## **System Utilities**

## **BIOS Setup Utility**

The BIOS Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System).

Your computer is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run Setup. Please also refer to Chapter 4 Troubleshooting when problem arises.

To activate the BIOS Utility, press [72] during POST (when "Press <F2> to enter Setup" message is prompted on the bottom of screen).

Press to enter setup. Press <F12> during POST to enter multi-boot menu. In this menu, user can change boot device without entering BIOS SETUP Utility.

PhoenixBIOS Setup Utility						
Information	Main	Advanced	Security	Boot	Exit	

CPU Type: Intel (R) Pentium (R) M processor

CPU Speed: 1500 MHz

Floppy Drive: None IDE1 Model Name: None IDE1 Serial Number: None

IDE2 Model Number: QSI CD-RW/DVD-ROM SBW242U- (SM)

IDE2 Serial Number: None

System BIOS Ver: Canary V0.20

VGA BIOS Ver: 2991 KBC Ver: 02.13.29

Asset Tag Number: N/A

Product Name: TravelMate C300

Manufacturer Name: Acer

UUID: XXXXXXXX-XXXX-XXXX-XXXXXXXXXXXX

F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
Esc Exit	←→ Select Menu	Enter Select ▶ Sub-Menu	F10 Save and Exit

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## **Navigating the BIOS Utility**

There are six menu options: Information, Main, Advanced, Security, Boot, and Exit.

Follow these instructions:

To choose a menu, use the cursor left/right keys (☐ ☐).
To choose a parameter, use the cursor up/down keys ( <a>↑</a> .
To change the value of a parameter, press  or or.
A plus sign (+) indicates the item has sub-items. Press expand this item.
Press ESC while you are in any of the menu options to go to the Exit menu.
In any menu, you can load default settings by pressing  ☐. You can also press ☐ to save any changes made and exit the BIOS Setup Utility.

**NOTE:** You can change the value of a parameter if it is enclosed in square brackets. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values.

This menu provides you the information of the system.

#### Information

# PhoenixBIOS Setup Utility Information Main Advanced Security Boot Exit

CPU Type: Intel (R) Pentium (R) M processor

CPU Speed: 1500 MHz
Floppy Drive: None
IDE1 Model Name: None
IDE1 Serial Number: None

IDE2 Model Number: QSI CD-RW/DVD-ROM SBW242U- (SM)

IDE2 Serial Number: None

System BIOS Ver: Canary V0.20

VGA BIOS Ver: 2991 KBC Ver: 02.13.29

Asset Tag Number: N/A

Product Name: TravelMate C300

Manufacturer Name: Acer

UUID: xxxxxxxx-xxxx-xxxx-xxxxxxxxxxx

F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
Esc Exit	←→ Select Menu	Enter Select ▶ Sub-Menu	F10 Save and Exit

Parameter	Description
IDE1 Model Name	Shows the Model name of HDD installed on Primary IDE master. The hard disk model name is automatically detected by the system. If there is no hard disk present or unknown type, " <b>None</b> " should be shown on this field.
IDE1 Serial #	This field display the Serial number of HDD installed on Primary IDE master. If no Hard disk or other devices are installed on Primary IDE master, then it will display a blank line.
IDE2 Model Name	This item will show the Model name of device installed on Secondary IDE master. The hard disk or CD-ROM model name is automatically detected by the system. If there is no hard disk or CD-ROM present or unknown type, " <b>None</b> " should be shown on this field.
IDE2 Serial #	This item will show the Serial number of HDD installed on Secondary IDE master. If no hard disk or other devices are installed on Primary IDE master, then it will display a blank line.
Serial Number	This field displays the serial number of this unit.
UUID Number	UUID=32bytes

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#### Main

Esc Exit

The Main screen displays a summary of your computer hardware information, and also includes basic setup parameters. It allows the user to specify standard IBM PC AT system parameters.

PhoenixBIOS Setup Utility					
Information	Main Advand	ced Se	curity	Boot	Exit
				Item Spo	ecific Help
System Time:	[00:00:00]				
System Date:	[10/11/2003]			<tab>, <sl< td=""><td>nift-Tab&gt;, or lects field.</td></sl<></tab>	nift-Tab>, or lects field.
System Memory:	640 KB			2.11.01	iodo iiola.
Extended Memory:	248 MB				
VGA Memory:	8 MB				
Quiet Boot:	[Enabled]				
Power on display:	[Auto]				
LCD Auto Dim:	[Enabled]				
PXE Boot From LAN	[Disabled]				
F12 Boot Menu	[Enabled]				
E4 Hala	Calaatitam	EF/EC Char	nas Values		Cotus Defeults
F1 Help ↑↓	Select Item	F5/F6 Cha	nge values		F9 Setup Defaults

Enter Select ▶ Sub-Menu

F10 Save and Exit

NOTE: The screen above is for reference only. Actual values may differ.

Select Menu

The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Format/Option
System Time	Sets the system time.	Format: HH:MM:SS (hour:minute:second) System Time
System Date	Sets the system date.	Format MM/DD/YYYY (month/day/ year) System Date
System Memory	This field reports the memory size of the system.  Memory size is fixed to 640MB	
Extended Memory	This field reports the memory size of the extended memory in the system.  Extended Memory size=Total memory size-1MB	
VGA Memory	Shows the VGA memory size. The default value is set to 8MB.  Note: 8MB is VGA memory size under DOS mode. Dynamic video memory allocation up to 64MB in Windows mode.	
Quiet Boot	Determines if Customer Logo will be displayed or not; shows Summary Screen is disabled or enabled.  Enabled: Customer Logo is displayed, and Summary Screen is disabled.  Disabled: Customer Logo is not displayed, and Summary Screen is enabled.	Option: <b>Enabled</b> or Disabled
Power on display	Auto: During power process, the system will detect if any display device is connected on external video port. If any external display device is connected, the power on display will be in CRT (or projector) only mode. Otherwise it will be in LCD only mode.  Both: Simultaneously enable both the integrated LCD screen and the system's external video port (for an external CRT or projector).	Option: <b>Auto</b> or Both
LCD Auto Dim	Determines if the system will automatically dim the LCD brightness in order to save power when AC is not present.	Option: Enabled or Disabled
PXE (Preboot Execution Environment) Boot From LAN	Indicates that whether the notebook can boot from LAN or not.	Option: Enabled or Disabled
F12 Boot Menu	Determines if the OEM POST screen will have "Press <f12> Change Boot Device" or not during user's quite boot.</f12>	Option: Enabled or Disabled

**NOTE:** The sub-items under each device will not be shown if the device control is set to disable or auto. This is because the user is not allowed to control the settings in these cases.

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#### **Advanced**

The Advanced menu screen contains parameters involving your hardware devices. It also provides advanced settings of the system.

	PhoenixBIOS Setup Utility						
Inf	ormation	Main	Advanced	Securi	ty	Boot	Exit
						Item :	Specific Help
Ir	nfrared/Seria	l port: :		[Disal	oled]		
<b>E</b> 4				F0 01 -	V/ 1		F0 0 1 D 5 "
F1	Help	↑ ↓ Select		F6 Change			F9 Setup Defaults
Esc	Exit	← → Select	Menu Ent	er Select	▶ Sub-	Menu	F10 Save and Exit

The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Options
Infrared/Serial port	Enables, disables the infrared/serial port.	Enabled/Disabled

### **Security**

Help

Esc Exit

←→ Select Menu

The Security screen contains parameters that help safeguard and protect your computer from unauthorized use

PhoenixBIOS Setup Utility					
Information	Main	Advanced	Security	Boot	Exit
				Item :	Specific Help
User Password	is	Clear			
Supervisor Pass	sword is	Clear			
				Supervi	sor Password
Set User Password		[Enter]		controls	accesses of the
Set Supervisor I	Password	[Enter]		whole so	etup utility.
				It can be	e used to
				boot up	when Password
Password on bo	oot:	[Enabled]		on boot	is enabled.

The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

F5/F6 Change Values

Enter Select ▶ Sub-Menu

F9 Setup Defaults

F10 Save and Exit

Parameter	Description	Option
User Password is	Shows the setting of the uer password.	Clear or Set
Supervisor Password is	Shows the setting of the Supervisor password	Clear or Set
Set User Password	Press Enter to set the user password. When set, this password protects the BIOS Setup Utility from unauthorized access.	
Set Supervisor Password	Press Enter to set the supervisor password. When set, this password protects the BIOS Setup Utility from unauthorized access.	
Password on Boot	Defines whether a password is required or not while the events defined in this group happened. The following sub-options are all requires the Supervisor password for changes and should be grayed out if the user password was used to enter setup.	<b>Disabled</b> or Enabled

**NOTE:** When you are prompted to enter a password, you have three tries before the system halts. Don't forget your password. If you forget your password, you may have to return your notebook computer to your dealer to reset it.

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#### **Setting a Password**

Follow these steps as you set the user or the supervisor password:

1. Use the 1 and 1 keys to highlight the Set Supervisor Password parameter and press the key. The Set Supervisor Password box appears:

Set Supervisor Pass	sword	
Enter New Password	[	]
Confirm New Password	]	]

2. Type a password in the "Enter New Password" field. The password length can not exceeds 8 alphanumeric characters (A-Z, a-z, 0-9, not case sensitive). Retype the password in the "Confirm New Password" field.

IMPORTANT: Be very careful when typing your password because the characters do not appear on the screen.

- 3. Press ENTER .
  - After setting the password, the computer sets the User Password parameter to "Set".
- 4. If desired, you can opt to enable the Password on boot parameter.
- 5. When you are done, press of to save the changes and exit the BIOS Setup Utility.

#### Removing a Password

Follow these steps:

1. Use the 1 and 1 keys to highlight the Set Supervisor Password parameter and press the key. The Set Password box appears:

Set Supervisor Passwo	ord	100
Enter current password	]	]
Enter New Password	[	]
Confirm New Password	[	]

- 2. Type the current password in the Enter Current Password field and press  $\[ \]$
- 3. Press without typing anything in the Enter New Password and Confirm New Password fields. The computer then sets the Supervisor Password parameter to "Clear".
- **4.** When you have changed the settings, press ☐ to save the changes and exit the BIOS Setup Utility.

#### **Changing a Password**

1. Use the 1 and 1 keys to highlight the Set Supervisor Password parameter and press the key. The Set Password box appears:

 Set Supervisor Password

 Enter current password [ ]

 Enter New Password [ ]

 Confirm New Password [ ]

- 2. Type the current password in the Enter Current Password field and press end.
- 3. Type a password in the Enter New Password field. Retype the password in the Confirm New Password field.
- 4. Press [NIE]. After setting the password, the computer sets the User Password parameter to "Set".
- **5.** If desired, you can enable the Password on boot parameter.
- **6.** When you are done, press or to save the changes and exit the BIOS Setup Utility.

If the verification is OK, the screen will display as following.

Setup Notice Changes have been saved. [ continue]

The password setting is complete after the user presses .

If the current password entered does not match the actual current password, the screen will show you the Setup Warning.

Setup Warning Invalid password Re-enter Password [ continue]

If the new password and confirm new password strings do not match, the screen will display the following message.

Setup Warning Password do not match Re-enter Password

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#### **Boot**

This menu allows the user to decide the order of boot devices to load the operating system. Bootable devices includes the distette drive in module bay, the onboard hard disk drive and the CD-ROM in module bay.

PhoenixBIOS Setup Utility							
Information	Main	Advanced	Secur	ity	Boot	Exit	
					T		
					Item S	specific Help	
Hard Drive							
Removable D	evice				Keys used to view or configure		
CD-ROM Driv	/e				Collapse + or - <ctrl+en +="" 7="" <+="" <shift="" a="" device.=""> and up or dov <n> May device be Removale</n></ctrl+en>	<-> moves the device wn. move removable etween Hard Disk or ole Disk. nove a device that is	
F1 Help	↑↓ Select l	tem _E5/	F6 Change	e Values		F9 Setup Defaults	
Esc Exit	←→ Select		er Select			F10 Save and Exit	

#### Exit

The Exit screen contains parameters that help safeguard and protect your computer from unauthorized use.



The table below describes the parameters in this screen.

Parameter	Description
Exit Saving Changes	Exit System Setup and save your changes to CMOS.
Exit Discarding Changes	Exit utility without saving setup data to CMOS.
Load Setup Default	Load default values for all SETUP item.
Discard Changes	Load previous values from CMOS for all SETUP items.
Save Changes	Save Setup Data to CMOS.

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## **BIOS Flash Utility**

The BIOS flash memo	rv undate is i	equired for the	following	conditions:
THE BIGG HASH HIGHIG	i y upuato is i	equiled for the		CONTRICTIONS.

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

Use the Phlash utility to update the system BIOS flash ROM.

**NOTE:** If you do not have a crisis recovery diskette at hand, then you should create a **Crisis Recovery Diskette** before you use the Phlash utility.

NOTE: Do not install memory-related drivers (XMS, EMS, DPMI) when you use the Phlash.

**NOTE:** Please use the AC adaptor power supply when you run the Phlash utility. If the battery pack does not contain enough power to finish BIOS flash, you may not boot the system because the BIOS is not completely loaded.

Fellow the steps below to run the Phlash.

- 1. Prepare a bootable diskette.
- 2. Copy the Phlash utilities to the bootable diskette.
- 3. Then boot the system from the bootable diskette. The Phlash utility has auto-execution function.

# Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
   Philips screw drivers
   Flat head screwdriver
- **NOTE:** The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components. When you remove the middle cover, please be careful not to scrape the cover.

## **General Information**

#### Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

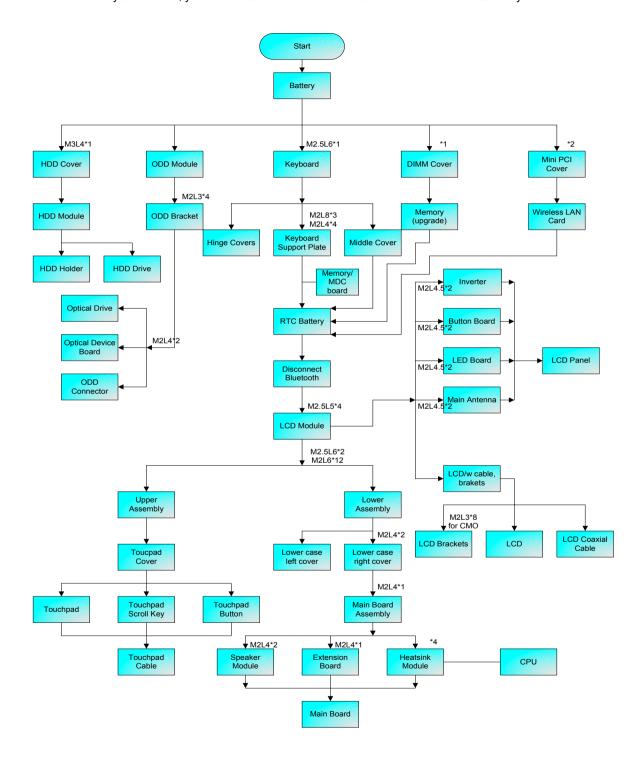
- 1. Turn off the power to the system and all peripherals.
- 2. Unplug the AC adapter and all power and signal cables from the system.
- 3. Remove the battery pack.

**NOTE:** TravelMate C300 series product uses tape to fasten the antenna/cable, you may need to tear the tape before you remove the antenna.

**NOTE:** The disassembly is based on an engineering sample, therefore, the number of the screws may differ from what you would actually get.

## Disassembly Procedure Flowchart

The flowchart on the succeeding page gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the system board, you must first remove the then disassemble the inside assembly frame in that order.



# Removing the Battery Pack

- 1. Release the battery lock.
- 2. Slide the battery latch then remove the battery.





# Removing the HDD Module/Optical Module/Wireless LAN Card/Keyboard and LCD Module

#### Removing the HDD Module

- 1. Remove the two screws holding the HDD cover.
- 2. Pull out the hard disk drive then detach it from the main unit.





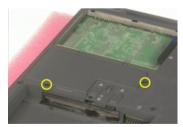
#### Removing the Optical Disc Drive Module

1. Slide the ODD latch then remove the ODD module from the main unit carefully.



#### Removing the Wireless LAN Card

- 1. Remove the two screws that fasten the Mini PCI cover.
- 2. Disconnect the main and the auxiliary antenna.
- 3. Pop out the wireless LAN card then remove it.







#### Removing the Keyboard

- 1. Remove the screw holding the keyboard.
- 2. Release the keyboard locks.
- 3. Turn the keyboard over and disconnect the keyboard cable then remove the keyboard.







## Removing the LCD Module

- 1. See "Removing the Keyboard" on page 51.
- 2. Rotate the LCD module clockwise 135 degree.
- 3. Press down the LCD module as picture shows.
- 4. Detach the front hinge cap carefully.







**NOTE:** Hinge caps disassembling SOP (step2-step7) is different from what you will see on the mepg files. You can disassemble either the front or the back hinge cap first as you like. Both methods are workable.

- 5. After detach the front hinge cap, erecat the LCD module as picture shows.
- 6. Rotate the LCD module counter-clockwise 90 degree. Then press down the LCD module a little bit.
- 7. Remove the back hinge cap carefully.



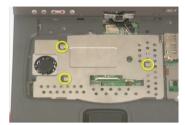




Detach the middle cover carefully.



- 9. Remove the three screws holding the keyboard support plate then remove the plate.
- 10. Remove the screw fastening the modem board.
- 11. Disconnect bluetooth antenna.

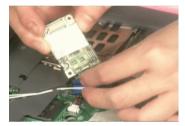






**NOTE:** This is an engineering sample. The number of screws holding the keyboard support plate maybe vary from the mass production units.

- 12. Disconnect the modem board cable then remove the modem board.
- 13. Pull out the wireless antenna from the hole on the main board.
- 14. Remove the four screws fastening the LCD module; two on the front and another two on the back.







- 15. Place the LCD module as the picture shows carefully.
- 16. Disconnect the LCD coaxial cable and inverter cable respectively.





## Disassembling the Main Unit

### Separate the main unit into the logic upper and the logic lower assembly

- 1. Disconnect the RTC battery then remove it.
- 2. Pop out the memory then remove it from the DIMM socket.
- 3. Remove the 14 screws holding the upper case assembly and the lower case assembly.







- 4. Remove the screw holding the upper case assembly and lower case assembly.
- 5. Disconnect touchpad cable connecting to the main board.
- 6. Separate the main unit into the upper case assembly and the lower case assembly.







#### Disassembling the logic upper assembly

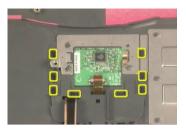
- 1. Disconnect the touchpad cable.
- 2. Tear off the touchpad cable.





**NOTE:** The touchpad cable has been fastened very tight to the upper case by black tape. It is easy tear the touchpad cable when removing the black tape.

- 3. Release the touchpad cover latches.
- 4. Detach the touchpad holder.





- 5. Remove the touchpad.
- 6. Detach the touchpad button.
- 7. Then detach touchpad scroll key.





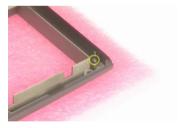


### Disassembling the logic lower assembly

- 1. Remove the lower case left cover.
- 2. Remove the screw holding the lower case right cover.
- 3. Then remove another screw fastening the lower case right cover.







- 4. Remove the lower case right cover.
- **5.** Disconnect the speaker cable.
- 6. Remove the screw that secure the main board to the lower case.

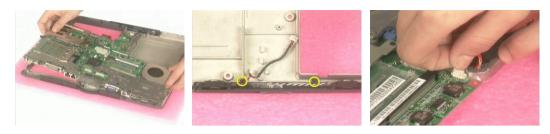






- 7. Take out the main board from the lower case.
- 8. Remove the two screws that fasten the speaker module.

#### **9.** Disconnect the fan cable.



- **10.** Remove the four screws that fasten the heatsink module then remove the heatsink module.
- 11. Release the CPU lock with a flat-head screwdriver then remove the CPU from the socket.
- **12.** Take the main board off the thermal plate.







- 13. Remove the screw that secures the extension board.
- 14. Disconnect the card reader cabele.
- 15. Remove the three screws fastening the card reader slot then detach the card reader slot.







# Disassembling the LCD Module

- 1. Remove the four LCD screw caps.
- 2. Then remove the four screws that secure the LCD bezel.
- 3. Detach the LCD bezel carefully.







- 4. Tear off the tape fastening the bluetooth antenna.
- 5. Then remove the bluetooth antenna from the LCD bezel.
- 6. Then disconnect the LCD inverter cable.







- 7. Remove the auxiliary wireless antenna.
- 8. Pull out the main wireless antenna, LCD coaxial cable and inverter cable.
- 9. Remove the two screws holding the inverter.







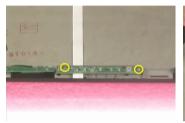
- 10. Disconnect the inverter cable then remove the inverter.
- **11.** Remove the four screws that secure the LCD to the LCD panel; two on each side.
- 12. Take out the LCD from the LCD panel.



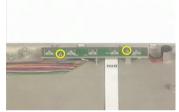




- 13. Remove the two screws holding the LED board.
- 14. Disconnect the LED board cable.
- 15. Remove the two screws that secure the button board.







- 16. Take out the microphone, detach the button board assembly.
- 17. Disconnect the microphone, the LCD coaxial cable and the button board to LED board cable.
- 18. Tear off the tape fastening the main wireless antenna.







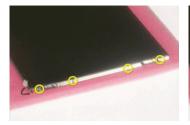
- 19. Remove the two screws holding the main wireless antenna.
- 20. Remove the main wireless antenna from the LCD panel.
- 21. Disconnect the LCD coaxial cable and detach the cable from the LCD.







- 22. Remove the eight screws fastening the LCD brackets; four on each side.
- 23. Remove the right and the left LCD brackets.





## Disassembling the External Modules

#### Disassembling and Reassembling the HDD Module

- 1. Remove the screw holding the HDD holder.
- 2. Take out the hard disc drive from the HDD holder carefully.





- 3. Place the hard disc drive back to the HDD holder.
- 4. Secure the hard disc drive to the HDD holder witht the screw as shown.





#### Disassembling and Reassembling the Optical Disc Drive Module

- 1. Remove the two screws holding the optical bracket.
- 2. Remove another two screws as shown.
- 3. Then remove the optical bracket.







- 4. Remove the two screws holding the optical board.
- 5. Remove the optical device board.
- 6. Reattach the optical device board to the optical disc drive.



- 7. Secure the optical device board with two screws as shown.
- 8. Attach the optical bracket back to the ODD.



- 9. Secure the optical bracket with the two screws as shown.
- **10.** Then fasten the optical braket with another two screws as shown.



# Assemble the Hinge Caps

- 1. Rotate the LCD module clockwise 135 degree. Press down the LCD module as picture shows.
- 2. Place the front hinge cap back to its original position.
- 3. Press the front hinge cap until you hear a click.







- **4.** After attach the front hinge cap, erecat the LCD module as picture shows.
- 5. Rotate the LCD module counter-clockwise 90 degree. Then press down the LCD module a little bit.
- 6. Place the back hinge cap back the unit as picture shows.







7. Press down the back hinge cap until you hear a click.



# Troubleshooting

Use the following procedure as a guide for computer problems.

**NOTE:** The diagnostic tests are intended to test this model. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

- 1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
- 2. Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
- 3. Disassemble and assemble the unit without any power sources.
- 4. If any problem occurs, you can perform visual inspection before you fellow this chapter's instructions. You can check the following:

power cords are properly connected and secured;

there are no obvious shorts or opens;

there are no obviously burned or heated components;

all components appear normal.

5. Use the following table with the verified symptom to determine which page to go to.

Symptoms (Verified)	Go То
Power failure. (The power indicator does not go on or stay on.)	"Power System Check" on page 65.
POST does not complete. No beep or error codes are indicated.	"Power-On Self-Test (POST) Error Message" on page 67
	"Undetermined Problems" on page 79
POST detects an error and displayed messages on screen.	"Error Message List" on page 68
Other symptoms (i.e. LCD display problems or others).	"Power-On Self-Test (POST) Error Message" on page 67
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to "Power-On Self-Test (POST) Error Message" on page 67
	"Intermittent Problems" on page 78
	"Undetermined Problems" on page 79

Chapter 4 63

## **System Check Procedures**

#### **External Diskette Drive Check**

Do the following to isolate the problem to a controller, driver, or diskette. A write-enabled, diagnostic diskette is required.

**NOTE:** Make sure that the diskette does not have more than one label attached to it. Multiple labels can cause damage to the drive or cause the drive to fail.

Do the following to select the test device.

- Boot from the diagnostics diskette and start the diagnostics program.
- See if FDD Test is passed as the program runs to FDD Test.
- 3. Follow the instructions in the message window.

If an error occurs with the internal diskette drive, reconnect the diskette connector on the system board.

If the error still remains:

- 1. Reconnect the external diskette drive/DVD-ROM module.
- 2. Replace the external diskette drive/CD-ROM module.
- 3. Replace the main board.

#### **External CD-ROM Drive Check**

Do the following to isolate the problem to a controller, drive, or CD-ROM. Make sure that the CD-ROM does not have any label attached to it. The label can cause damage to the drive or can cause the drive to fail.

Do the following to select the test device:

- 1. Boot from the diagnostics diskette and start the diagnostics program.
- 2. See if CD-ROM Test is passed when the program runs to CD-ROM Test.
- 3. Follow the instructions in the message window.

If an error occurs, reconnect the connector on the System board. If the error still remains:

- 1. Reconnect the external diskette drive/CD-ROM module.
- 2. Replace the external diskette drive/CD-ROM module.
- 3. Replace the main board.

#### **Keyboard or Auxiliary Input Device Check**

Remove the external keyboard if the internal keyboard is to be tested.

If the internal keyboard does not work or an unexpected character appears, make sure that the flexible cable extending from the keyboard is correctly seated in the connector on the system board.

If the keyboard cable connection is correct, run the Keyboard Test.

If the tests detect a keyboard problem, do the following one at a time to correct the problem. Do not replace a non-defective FRU:

- 1. Reconnect the keyboard cables.
- Replace the keyboard.
- 3. Replace the main board.

The following auxiliary input devices are supported by this computer:

	lumeric	keypad
--	---------	--------

External keyboard

If any of these devices do not work, reconnect the cable connector and repeat the failing operation.

#### **Memory check**

Memory errors might stop system operations, show error messages on the screen, or hang the system.

- 1. Boot from the diagnostics diskette and start the doagmpstotics program (please refer to main board.
- 2. Go to the diagnostic memory in the test items.
- 3. Press F2 in the test items.
- 4. Follow the instructions in the message window.

NOTE: Make sure that the DIMM is fully installed into the connector. A loose connection can cause an error.

#### **Power System Check**

To verify the symptom of the problem, power on the computer using each of the following power sources:

- 1. Remove the battery pack.
- 2. Connect the power adapter and check that power is supplied.
- 3. Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

If you suspect a power problem, see the appropriate power supply check in the following list:

□ "Check the Battery Pack" on page 66

Chapter 4 65

#### **Check the Battery Pack**

To check the battery pack, do the following:

#### From Software:

- Check out the Power Management in control Panel
- In Power Meter, confirm that if the parameters shown in the screen for Current Power Source and Total Battery Power Remaining are correct.
- 3. Repeat the steps 1 and 2, for both battery and adapter.
- 4. This helps you identify first the problem is on recharging or discharging.

#### From Hardware:

- 1. Power off the computer.
- Remove the battery pack and measure the voltage between battery terminals 1(+) and 6(ground). See the following figure
- 3. If the voltage is still less than 7.5 Vdc after recharging, replace the battery.

To check the battery charge operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

If the battery status indicator does not light up, remove the battery pack and let it return to room temperature. Re-install the battery pack.

If the charge indicator still does not light up, replace the battery pack. If the charge indicator still does not light up, replace the DC/DC charger board.

#### Touchpad check

If the touchpad doesn't work, do the following actions one at a time to correct the problem. Do not replace a non-defective FRU:

- After rebooting, run Tracking Pad PS2 Mode Driver. For example, run Syn touch driver.
- 2. Run utility with the PS/2 mouse function and check if the mouse is working.
- 3. If the the PS/2 mouse does not work, then check if the main board to switch board FPC is connected O.K.
- **4.** If the main board to switch board FPC is connected well, then check if the FCC on touch pad PCB connects properly.
- 5. If the FFC on touch pad PCB connects properly, then check if LS851 JP1 Pin6=5V are pulese. If yes, then replace switch board. If no, then go to next step.
- 6. Replace touch pad PCB.
- 7. If the touch pad still does not work, then replace FPC on Track Pad PCB.

After you use the touchpad, the pointer drifts on the screen for a short time. This self-acting pointer movement can occur when a slight, steady pressure is applied to the touchpad pointer. This symptom is not a hardware problem. No service actions are necessary if the pointer movement stops in a short period of time.

## Power-On Self-Test (POST) Error Message

The POST error message index lists the error message and their possible causes. The most likely cause is listed first.

**NOTE:** Perform the FRU replacement or actions in the sequence shown in FRU/Action column, if the FRU replacement does not solve the problem, put the original part back in the computer. Do not replace a non-defective FRU.

This index can also help you determine the next possible FRU to be replaced when servicing a computer.

If the symptom is not listed, see "Undetermined Problems" on page 79.

The following lists the error messages that the BIOS displays on the screen and the error symptoms classified by function.

**NOTE:** Most of the error messages occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured.

**NOTE:** If the system fails after you make changes in the BIOS Setup Utility menus, reset the computer, enter Setup and install Setup defaults or correct the error.

Chapter 4 67

## **Index of Error Messages**

## **Error Message List**

Error Messages	FRU/Action in Sequence	
Struck Key	See ""Keyboard or Auxiliary Input Device Check" on page 64	
System CMOS checksum bad - Default configuration used	RTC battery Run BIOS Setup Utility to reconfigure system, then reboot system.	
Real time clock error	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system.  Main board	
Previous boot incomplete - Default configuration used	"Load Default Settings" in BIOS Setup Utility. RTC batter Main baord.	
Invalid System Configuration Data	"Load Default Settings" in BIOS Setup Utility. Main board.	
Operating system not found	Enter Setup and see if fixed disk and drive A are properly identified.  Dikette drive  Hard disk drive  Main board.	

### **Error Message List**

No beep Error Messages	FRU/Action in Sequence
Power-on indicator turns off and LCD is blank.	Power source (battery pack and power adapter.) See "Power System Check" on page 65
	Ensure every connector is connected tightly and correctly.
	Reconnect the DIMM.
	Main board.
Power-on indicator turns on and LCD is blank.	Power source (battery pack and power adapter.) See "Power System Check" on page 65
	Reconnect the LCD connector
	Hard disk drive
	LCD cable
	LCD inverter
	LCD
	Main board
Power-on indicator turns on and LCD is blank.	Reconnect the LCD connectors.
But you can see POST on an external CRT.	LCD cable
	LCD inverter
	LCD
	Main board
Power-on indicator turns on and a blinking cursor	Ensure every connector is connected tightly and correctly.
shown on LCD during POST.	Main board

Chapter 4 69

## **POST Codes**

Code	Beeps	POST Routine Description
02h	·	Verify Real Mode
03h		Disable Non-Maskable Interrupt (NMI)
04h		Get CPU type
06h		Initialize system hardware
08h		Initialize chipset with initial POST values
09h		Set IN POST flag
0Ah		Initialize CPU registers
0Bh		Enable CPU cache
0Ch		Initialize caches to initial POST values
0Eh		Initialize I/O component
0Fh		Initialize the local bus IDE
10h		Initialize Power Management
11h		Load alternate registers with initial POST values
12h		Restore CPU control word during warm boot
13h		Initialize PCI Bus Mastering devices
14h		Initialize keyboard controller
16h	1-2-2-3	BIOS ROM checksum
17h		Initialize cache before memory autosize
18h		8254 timer initialization
1Ah		8237 DMA controller initialization
1Ch		Reset Programmable Interrupt Controller
20h	1-3-1-1	Test DRAM refresh
22h	1-3-1-3	Test 8742 Keyboard Controller
24h		Set ES segment register to 4 GB
26h		Enable A20 line
28h		Autosize DRAM
29h		Initialize POST Memory Manager
2Ah		Clear 215 KB base RAM
2Ch	1-3-4-1	RAM failure on address line xxxx
2Eh	1-3-4-3	RAM failure on data bits xxxx of low byte of memory bus
2Fh		Enable cache before system BIOS shadow
30h	1-4-1-1	RAM failure on data bits xxxx of high byte of memory bus
32h		Test CPU bus-clock frequency
33h		Initialize Phoenix Dispatch Manager
36h		Warm start shut down
38h		Shadow system BIOS ROM
3Ah		Autosize cache
3Ch		Advanced configuration of chipset registers
3Dh		Load alternate registers with CMOS values
42h		Initialize interrupt vectors
45h		POST device initialization
46h	2-1-2-3	Check ROM copyright notice

48h         Check video configuration against CMOS           49h         Initialize PCI bus and devices           4Ah         Initialize PCI bus and devices           4Ah         Initialize all video adapters in system           4Bh         QuidBoot start (optional)           4Ch         Shadow video BIOS ROM           4Eh         Display BIOS copyright notice           50h         Display BIOS copyright notice           50h         Display CPU type and speed           51h         Initialize EISA board           52h         Test keyboard           54h         Set key click if enabled           58h         2-2-3-1           58h         2-2-3-1           64h         Set key click if enabled           58h         2-2-3-1           1 Initialize POST display service           6Ah         Display prompt "Press F2 to enter SETUP"           5Bh         Display prompt "Press F2 to enter SETUP"           5Bh         Display prompt "Press F2 to enter SETUP"           6Ch         Test standed memory address lines           6Ch         Test extended memory address lines           6Ch         Test extended memory address lines           6Ah         Jump to User Patch1           6Ch	Code	Beeps	POST Routine Description
Alph	48h	-	Check video configuration against CMOS
ABh	49h		Initialize PCI bus and devices
4Ch         Shadow video BIOS ROM           4Eh         Display BIOS copyright notice           50h         Display CPU type and speed           51h         Initialize EISA board           52h         Test keyboard           54h         Set key click if enabled           58h         2-2-3-1           59h         Initialize POST display service           59h         Display prompt "Press F2 to enter SETUP"           58h         Display EXEMPAL PROMPT           60h         Test extended memory           62ch         Test extended memory           62h         Test extended memory           62h         Test extended memory           62h         Test extended memory           62h         Jump to User Patch1           68h         Configure advanced cache registers           67h         Initialize Extended Bios Initialize ACM<	4Ah		Initialize all video adapters in system
Display BIOS copyright notice 50h Display CPU type and speed 51h Initialize EISA board 52h Fest keyboard 54h Set key click if enabled 58h 2-2-3-1 Fest for unexpected interrupts 58h Display prompt "Press F2 to enter SETUP" 58h Display external f2 and 640 KB 69h Display external processor APIC 68h Configure advanced cache registers 67h Initialize Multi Processor APIC 68h Setup System Management Mode (SMM) area 68h Setup System Management Mode (SMM) area 68h Display external L2 cache size 68h Display possible high address for UMB recovery 70h Display phadow-area message Display prompt processor If present Display error messages Check for configuration errors 70h Display error messages Display	4Bh		QuietBoot start (optional)
50h         Display CPU type and speed           51h         Initialize EISA board           52h         Test keyboard           54h         Set key click if enabled           58h         2-2-3-1           59h         Initialize POST display service           5Ah         Display prompt "Press F2 to enter SETUP"           5Bh         Display CPU cache           6Ch         Test extended memory           62h         Test extended memory address lines           64h         Jump to User Patch1           66h         Configure advanced cache registers           67h         Initialize Multi Processor APIC           68h         Enable external and CPU caches           69h         Setup System Management Mode (SMM) area           68h         Enable external and CPU caches           69h         Setup System Management Mode (SMM) area           6Bh         Load custom defaults (optional)           6Ch	4Ch		Shadow video BIOS ROM
5th Initialize EISA board  5th Test keyboard  5th Set key click if enabled  5th Set key click if enabled  5th Set key click if enabled  5th Set for unexpected interrupts  5th Initialize POST display service  5th Display prompt "Press F2 to enter SETUP"  5th Disable CPU cache  5th Disable CPU cache  1	4Eh		Display BIOS copyright notice
52h       Test keyboard         54h       Set key click if enabled         58h       2-2-3-1       Test for unexpected interrupts         59h       Initialize POST display service         5Ah       Display prompt 'Press F2 to enter SETUP'         5Bh       Disable CPU cache         5Ch       Test RAM between 512 and 640 KB         60h       Test extended memory address lines         62h       Test extended memory address lines         64h       Jump to User Patch1         66h       Configure advanced cache registers         67h       Initialize Multi Processor APIC         68h       Enable external and CPU caches         69h       Setup System Management Mode (SMM) area         68h       Display external L2 cache size         69h       Setup System Management Mode (SMM) area         6Bh       Load custom defaults (optional)         6Ch       Display external L2 cache size         6Bh       Load custom defaults (optional)         6Ch       Display possible high address for UMB recovery         70h       Display possible high address for UMB recovery         70h       Display possible high address for UMB recovery         72h       Check for keyboard errors         76h	50h		Display CPU type and speed
Set key click if enabled  58h 2-2-3-1 Test for unexpected interrupts  59h Initialize POST display service  5Ah Display prompt "Press F2 to enter SETUP"  5Bh Display Prompt "Press F2 to enter SETUP"  6Bh Test extended memory address lines  64h Jump to User Patch1  6Bh Configure advanced cache registers  67h Initialize Multi Processor APIC  68h Enable external and CPU caches  69h Setup System Management Mode (SMM) area  6Ah Display external L2 cache size  6Bh Display external L2 cache size  6Bh Display shadow-area message  6Eh Display possible high address for UMB recovery  70h Display error messages  6Eh Display error messages  72h Check for configuration errors  76h Check for configuration errors  76h Check for keyboard errors  76h Check for keyboard errors  8et up hardware interrupt vectors  11tialize coprocessor if present  80h Display ender on-MCD IDE controllers  84h Detect and install external parallel ports  87h Configure non-MCD IDE controllers  88h Initialize PC-compatible PnP ISA devices  88h Re-initialize and Configurable Devices (optional)  88h Initialize Extended BIOS Data Area  88h Initialize Extended BIOS Data Area	51h		Initialize EISA board
58h     2-2-3-1     Test for unexpected interrupts       59h     Initialize POST display service       5Ah     Display prompt "Press F2 to enter SETUP"       5Bh     Disable CPU cache       5Ch     Test RAM between 512 and 640 KB       60h     Test extended memory       62h     Test extended memory address lines       64h     Jump to User Patch1       66h     Configure advanced cache registers       67h     Initialize Multi Processor APIC       68h     Enable external and CPU caches       69h     Setup System Management Mode (SMM) area       6Ah     Display external L2 cache size       6Bh     Load custom defaults (optional)       6Ch     Display shadow-area message       6Eh     Display possible high address for UMB recovery       70h     Display prorr messages       72h     Check for configuration errors       76h     Check for keyboard errors       7Ch     Set up hardware interrupt vectors       7Eh     Initialize coprocessor if present       80h     Disable onboard Super I/O ports and IRQs       81h     Late POST device initialization       82h     Detect and install external parallel ports       84h     Detect and install external parallel ports       85h     Initialize PC-compatible PnP ISA devices	52h		Test keyboard
Initialize POST display service	54h		Set key click if enabled
Display prompt "Press F2 to enter SETUP"	58h	2-2-3-1	Test for unexpected interrupts
Disable CPU cache Test RAM between 512 and 640 KB Test extended memory Test extended memory Test extended memory address lines Jump to User Patch1 Configure advanced cache registers Initialize Multi Processor APIC Enable external and CPU caches Setup System Management Mode (SMM) area Display external L2 cache size Load custom defaults (optional) Check for configuration errors Display error messages The Check for configuration errors Check for keyboard errors Check for keyboard errors Teh Disable onboard Super I/O ports and IRQs Initialize Coprocessor if present Detect and install external PSE32 ports The Detect and install external parallel ports Initialize onboard I/O ports The Configure Motherboard Configurable Devices (optional) Initialize Extended BIOS Data Area BBh Initialize Extended BIOS Data Area	59h		Initialize POST display service
Test RAM between 512 and 640 KB  Total extended memory  Test extended memory  Test extended memory  Test extended memory address lines  Jump to User Patch1  Configure advanced cache registers  Initialize Multi Processor APIC  Bah  Enable external and CPU caches  Setup System Management Mode (SMM) area  Display external L2 cache size  Bah  Display external L2 cache size  Bah  Load custom defaults (optional)  Chan  Display possible high address for UMB recovery  Toh  Display possible high address for UMB recovery  Toh  Display error messages  Check for configuration errors  Check for keyboard errors  Check for keyboard errors  Set up hardware interrupt vectors  Initialize coprocessor if present  Disable onboard Super I/O ports and IRQs  Bah  Detect and install external parallel ports  Set up hardware install external parallel ports  Initialize PC-compatible PnP ISA devices  Re-initialize onboard I/O ports  The Configure Motherboard Configurable Devices (optional)  Reh  Initialize Extended BIOS Data Area  Bah  Initialize Extended BIOS Data Area	5Ah		Display prompt "Press F2 to enter SETUP"
Test extended memory 62h Test extended memory address lines 64h Jump to User Patch1 66h Configure advanced cache registers 67h Initialize Multi Processor APIC 68h Enable external and CPU caches 69h Setup System Management Mode (SMM) area 6Ah Display external L2 cache size 6Bh Load custom defaults (optional) 6Ch Display possible high address for UMB recovery 70h Display pror messages 72h Check for configuration errors 76h Check for keyboard errors 77ch Set up hardware interrupt vectors 77ch Set up hardware interrupt vectors 77ch Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize Extended BIOS Data Area 88h Initialize Extended BIOS Data Area	5Bh		Disable CPU cache
Test extended memory address lines  64h  Jump to User Patch1  Configure advanced cache registers  67h  Initialize Multi Processor APIC  88h  Enable external and CPU caches  69h  Setup System Management Mode (SMM) area  6Ah  Display external L2 cache size  6Bh  Load custom defaults (optional)  6Ch  Display possible high address for UMB recovery  70h  Display error messages  72h  Check for configuration errors  76h  Check for keyboard errors  76h  Set up hardware interrupt vectors  1 Initialize coprocessor if present  80h  Disable onboard Super I/O ports and IRQs  81h  Late POST device initialization  82h  Detect and install external RS232 ports  83h  Configure non-MCD IDE controllers  84h  Detect and install external parallel ports  1 Initialize PC-compatible PnP ISA devices  86h  Re-initialize onlocard Loports  87h  Configure Motherboard Configurable Devices (optional)  88h  Initialize BIOS Area  89h  Enable Non-Maskable Interrupts (NMIs)  Initialize Extended BIOS Data Area  88h  Initialize Extended BIOS Data Area	5Ch		Test RAM between 512 and 640 KB
G4h Jump to User Patch1  G6h Configure advanced cache registers  G7h Initialize Multi Processor APIC  B6h Enable external and CPU caches  G9h Setup System Management Mode (SMM) area  GAh Display external L2 cache size  GBh Load custom defaults (optional)  GCh Display possible high address for UMB recovery  TOh Display error messages  T2h Check for configuration errors  T6h Check for keyboard errors  T6h Check for keyboard errors  T6h Initialize coprocessor if present  B0h Disable onboard Super I/O ports and IRQs  B1h Late POST device initialization  B2h Detect and install external RS232 ports  B3h Configure non-MCD IDE controllers  B4h Detect and install external parallel ports  Initialize PC-compatible PnP ISA devices  B6h Re-initialize noboard I/O ports  T6h Configure Motherboard Configurable Devices (optional)  B8h Initialize Extended BIOS Data Area  B8h Test and initialize Extended BIOS Data Area	60h		Test extended memory
64h       Jump to User Patch1         66h       Configure advanced cache registers         67h       Initialize Multi Processor APIC         68h       Enable external and CPU caches         69h       Setup System Management Mode (SMM) area         6Ah       Display external L2 cache size         6Bh       Load custom defaults (optional)         6Ch       Display possible high address for UMB recovery         70h       Display possible high address for UMB recovery         70h       Display error messages         72h       Check for configuration errors         76h       Check for keyboard errors         7Ch       Set up hardware interrupt vectors         7Eh       Initialize coprocessor if present         80h       Disable onboard Super I/O ports and IRQs         81h       Late POST device initialization         82h       Detect and install external parallel ports         83h       Configure non-MCD IDE controllers         84h       Detect and install external parallel ports         85h       Initialize PC-compatible PnP ISA devices         86h       Re-initialize onboard I/O ports         87h       Configure Motherboard Configurable Devices (optional)         88h       Initialize BIOS Area	62h		Test extended memory address lines
Initialize Multi Processor APIC	64h		·
Enable external and CPU caches  69h Setup System Management Mode (SMM) area  6Ah Display external L2 cache size  6Bh Load custom defaults (optional)  6Ch Display possible high address for UMB recovery  70h Display error message  72h Check for configuration errors  76h Check for keyboard errors  7Ch Set up hardware interrupt vectors  7Eh Initialize coprocessor if present  80h Disable onboard Super I/O ports and IRQs  81h Late POST device initialization  82h Detect and install external parallel ports  84h Detect and install external parallel ports  85h Re-initialize PC-compatible PnP ISA devices  86h Re-initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  84h Initialize Extended BIOS Data Area  88h Test and initialize PS/2 mouse	66h		Configure advanced cache registers
Setup System Management Mode (SMM) area  6Ah  Display external L2 cache size  Load custom defaults (optional)  6Ch  Display shadow-area message  6Eh  Display possible high address for UMB recovery  70h  Display error messages  72h  Check for configuration errors  76h  Check for keyboard errors  76h  Set up hardware interrupt vectors  77h  Initialize coprocessor if present  80h  Disable onboard Super I/O ports and IRQs  81h  Late POST device initialization  82h  Detect and install external RS232 ports  83h  Configure non-MCD IDE controllers  84h  Detect and install external parallel ports  85h  Initialize PC-compatible PnP ISA devices  86h  Re-initialize onboard I/O ports  87h  Configure Motherboard Configurable Devices (optional)  88h  Initialize BIOS Area  89h  Enable Non-Maskable Interrupts (NMIs)  Ahh  Initialize Extended BIOS Data Area  88h  Test and initialize PS/2 mouse	67h		, ,
BAh Display external L2 cache size BBh Load custom defaults (optional) BCh Display shadow-area message BEh Display possible high address for UMB recovery Display possible high address for UMB recovery TOh Display error messages T2h Check for configuration errors Check for keyboard errors TCh Set up hardware interrupt vectors TEH Initialize coprocessor if present BOH Disable onboard Super I/O ports and IRQs B1h Late POST device initialization B2h Detect and install external RS232 ports Configure non-MCD IDE controllers B4h Detect and install external parallel ports B5h Initialize PC-compatible PnP ISA devices B6h Re-initialize onboard I/O ports B7h Configure Motherboard Configurable Devices (optional) B8h Initialize Extended BIOS Data Area B8h Test and initialize PS/2 mouse	68h		Enable external and CPU caches
BAh Display external L2 cache size BBh Load custom defaults (optional) BCh Display shadow-area message BEh Display possible high address for UMB recovery Display possible high address for UMB recovery TOh Display error messages T2h Check for configuration errors Check for keyboard errors TCh Set up hardware interrupt vectors TEH Initialize coprocessor if present BOH Disable onboard Super I/O ports and IRQs B1h Late POST device initialization B2h Detect and install external RS232 ports Configure non-MCD IDE controllers B4h Detect and install external parallel ports B5h Initialize PC-compatible PnP ISA devices B6h Re-initialize onboard I/O ports B7h Configure Motherboard Configurable Devices (optional) B8h Initialize Extended BIOS Data Area B8h Test and initialize PS/2 mouse	69h		Setup System Management Mode (SMM) area
BBh   Load custom defaults (optional)			, , , ,
6Ch Display shadow-area message 6Eh Display possible high address for UMB recovery 70h Display error messages 72h Check for configuration errors 76h Check for keyboard errors 77ch Set up hardware interrupt vectors 77ch Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Area 89h Enable Non-Maskable Interrupts (NMIs) 8Ah Initialize Extended BIOS Data Area	6Bh		
Display possible high address for UMB recovery    Display error messages	6Ch		` ' ,
recovery  70h Display error messages  72h Check for configuration errors  76h Check for keyboard errors  76h Set up hardware interrupt vectors  76h Initialize coprocessor if present  80h Disable onboard Super I/O ports and IRQs  81h Late POST device initialization  82h Detect and install external RS232 ports  83h Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area			, ,
Check for configuration errors  Check for keyboard errors  Check for keyboard errors  Check for keyboard errors  Set up hardware interrupt vectors  Initialize coprocessor if present  Initialize coprocessor if present  Disable onboard Super I/O ports and IRQs  Late POST device initialization  Each Detect and install external RS232 ports  Configure non-MCD IDE controllers  And Detect and install external parallel ports  Initialize PC-compatible PnP ISA devices  Re-initialize onboard I/O ports  Re-initialize onboard I/O ports  Configure Motherboard Configurable Devices (optional)  Initialize BIOS Area  Enable Non-Maskable Interrupts (NMIs)  Initialize Extended BIOS Data Area  Test and initialize PS/2 mouse			
76h Check for keyboard errors 7Ch Set up hardware interrupt vectors 7Eh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Area 89h Enable Non-Maskable Interrupts (NMIs) 8Ah Initialize Extended BIOS Data Area	70h		Display error messages
Set up hardware interrupt vectors  7Eh Initialize coprocessor if present  80h Disable onboard Super I/O ports and IRQs  81h Late POST device initialization  82h Detect and install external RS232 ports  83h Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area	72h		Check for configuration errors
TEh Initialize coprocessor if present  80h Disable onboard Super I/O ports and IRQs  81h Late POST device initialization  82h Detect and install external RS232 ports  83h Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	76h		Check for keyboard errors
B0h Disable onboard Super I/O ports and IRQs  81h Late POST device initialization  82h Detect and install external RS232 ports  83h Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	7Ch		Set up hardware interrupt vectors
B1h Late POST device initialization  B2h Detect and install external RS232 ports  B3h Configure non-MCD IDE controllers  B4h Detect and install external parallel ports  B5h Initialize PC-compatible PnP ISA devices  B6h Re-initialize onboard I/O ports  B7h Configure Motherboard Configurable Devices (optional)  B8h Initialize BIOS Area  B9h Enable Non-Maskable Interrupts (NMIs)  BAh Initialize Extended BIOS Data Area  BBh Test and initialize PS/2 mouse	7Eh		Initialize coprocessor if present
B2h Detect and install external RS232 ports  83h Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	80h		Disable onboard Super I/O ports and IRQs
Configure non-MCD IDE controllers  84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	81h		Late POST device initialization
84h Detect and install external parallel ports  85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	82h		Detect and install external RS232 ports
85h Initialize PC-compatible PnP ISA devices  86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	83h		Configure non-MCD IDE controllers
86h Re-initialize onboard I/O ports  87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	84h		Detect and install external parallel ports
87h Configure Motherboard Configurable Devices (optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	85h		Initialize PC-compatible PnP ISA devices
(optional)  88h Initialize BIOS Area  89h Enable Non-Maskable Interrupts (NMIs)  8Ah Initialize Extended BIOS Data Area  8Bh Test and initialize PS/2 mouse	86h		Re-initialize onboard I/O ports
89h Enable Non-Maskable Interrupts (NMIs) 8Ah Initialize Extended BIOS Data Area 8Bh Test and initialize PS/2 mouse	87h		
8Ah Initialize Extended BIOS Data Area 8Bh Test and initialize PS/2 mouse	88h		Initialize BIOS Area
8Bh Test and initialize PS/2 mouse	89h		Enable Non-Maskable Interrupts (NMIs)
	8Ah		Initialize Extended BIOS Data Area
8Ch Initialize floppy controller	8Bh		Test and initialize PS/2 mouse
	8Ch		Initialize floppy controller

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8Fh         Determine number of ATA drives (optional)           90h         Initialize hard-disk controllers           91h         Initialize local-bus hard-disk controllers           92h         Jump to UserPatch2           93h         Build MPTABLE for multi-processor boards           95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         Check for SMART drive (optional)           98h         Check for SMART drive (optional)           98h         Check for SMART drive (optional)           98h         Satur power Management           90h         Initialize security engine (optional)           98h         Enable hardware interrupts           90h         Initialize security engine (optional)           98h         Enable hardware interrupts           99h         Determine number of ATA and SCSI drives           90h         Lender bardware interrupts           97h         Determine number of ATA and SCSI drives           98h         Lender bardware interrupts           9Fh         Determine number of ATA and SCSI drives <th>Code</th> <th>Beeps</th> <th>POST Routine Description</th>	Code	Beeps	POST Routine Description
91h         Initialize local-bus hard-disk controllers           92h         Jump to UserPatch2           93h         Build MPTABLE for multi-processor boards           95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         Search for option ROMs. One long, two short beeps on checksum failure.           99h         Check for SMART drive (optional)           9Ah         Shadow option ROMs           9Ch         Set up Power Management           9Dh         Initialize security engine (optional)           9Eh         Enable hardware interrupts           9Eh         Enable hardware interrupts           9Fh         Determine number of ATA and SCSI drives           A0h         Set time of day           A2h         Check key lock           A4h         Initialize Typermatic rate           A8h         Erase F2 prompt           AAh         Scan for F2 key stroke           ACh         Enter SETUP           AEh         Check for errors           B0h         Check for errors           B2h         POST done- prepare to boot operating system           B4h         1         One short beep befor	8Fh	-	Determine number of ATA drives (optional)
92h         Jump to UserPatch2           93h         Build MPTABLE for multi-processor boards           95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         1-2         Search for option ROMs. One long, two short beeps on checksum failure.           99h         Check for SMART drive (optional)           9Ah         Shadow option ROMs           9Ch         Set up Power Management           9Dh         Initialize security engine (optional)           9Eh         Enable hardware interrupts           9Fh         Determine number of ATA and SCSI drives           9Fh         Determine number of ATA and S	90h		Initialize hard-disk controllers
93h         Build MPTABLE for multi-processor boards           95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         1-2         Search for option ROMs. One long, two short beeps on checksum failure.           99h         Check for SMART drive (optional)           9Ah         Shadow option ROMs           9Ch         Set up Power Management           9Dh         Initialize security engine (optional)           9Eh         Enable hardware interrupts           9Fh         Determine number of ATA and SCSI drives           9Fh         Determine number of day           A2h         Determine number of day           A2h         Check key lock           A4h         Initialize Typematic rate           A8h         Erase F2 prompt           A4h         Initialize Typematic rate           A2h         Check key lock           A2h         Check key Stoke           A2h         Check key Stoke           A2h         Erase F2 prompt           A3h         Erase F3 prompt           A4h         Initialize Typematic rate           B4h         Check set SET           B5h	91h		Initialize local-bus hard-disk controllers
95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         1-2         Search for option ROMs. One long, two short beeps on checksum failure.           99h         Check for SMART drive (optional)           9Ah         Shadow option ROMs           9Ch         Set up Power Management           9Dh         Initialize security engine (optional)           9Eh         Enable hardware interrupts           9Fh         Determine number of ATA and SCSI drives           A0h         Set time of day           A2h         Check key lock           A4h         Initialize Typematic rate           A8h         Erase F2 prompt           AAh         Scan for F2 key stroke           ACh         Enter SETUP           AEh         Clear Boot flag           B0h         Check for errors           B2h         POST done- prepare to boot operating system           B4h         1         One short beep before boot           B5h         Terminate QuietBoot (optional)           B6h         Check password (optional)           B6h         Check password (optional)           B7h         Initialize DMI parame	92h		Jump to UserPatch2
95h         Install CD ROM for boot           96h         Clear huge ES segment register           97h         Fixup Multi Processor table           98h         1-2         Search for option ROMs. One long, two short beeps on checksum failure.           99h         Check for SMART drive (optional)           9Ah         Shadow option ROMs           9Ch         Set up Power Management           9Dh         Initialize security engine (optional)           9Eh         Enable hardware interrupts           9Fh         Determine number of ATA and SCSI drives           A0h         Set time of day           A2h         Check key lock           A4h         Initialize Typematic rate           A8h         Erase F2 prompt           AAh         Scan for F2 key stroke           ACh         Enter SETUP           AEh         Clear Boot flag           B0h         Check for errors           B2h         POST done- prepare to boot operating system           B4h         1         One short beep before boot           B5h         Terminate QuietBoot (optional)           B6h         Check password (optional)           B6h         Check password (optional)           B7h         Initialize DMI parame	93h		Build MPTABLE for multi-processor boards
Fixup Multi Processor table 98h 1-2 Search for option ROMs. One long, two short beeps on checksum failure. 99h Check for SMART drive (optional) 9Ah Shadow option ROMs 9Ch Set up Power Management 9Dh Initialize security engine (optional) 9Eh Enable hardware interrupts 9Fh Determine number of ATA and SCSI drives ADh AZh Check key look A4h Initialize Typematic rate ABh Erase F2 prompt AAh Scan for F2 key stroke Enter SETUP AEh Clear Boot flag BDh BCh BCh BCh BCh BCh BCh BCh BCh BCh BC	95h		
98h 1-2 Search for option ROMs. One long, two short beeps on checksum failure. 99h Check for SMART drive (optional) 9Ah Shadow option ROMs 9Ch Set up Power Management 9Dh Initialize security engine (optional) 9Eh Enable hardware interrupts 9Fh Determine number of ATA and SCSI drives A0h Set time of day A2h Check key look A4h Initialize Typematic rate A8h Erase F2 prompt AAh Scan for F2 key stroke ACh Enter SETUP AEh Clear Boot flag B0h Check for errors B2h POST done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B6h Initialize DMI parameters B8h Initialize DMI parameters B8h Initialize DMI parameters B8h Clear parity checkers B0h Check rore rore B6h Clear parity checkers B7h Clear post flag B6h Check virus and backup reminders B6h	96h		Clear huge ES segment register
beeps on checksum failure.  99h Check for SMART drive (optional) 9Ah Shadow option ROMs 9Ch Set up Power Management 9Dh Initialize security engine (optional) 9Eh Enable hardware interrupts 9Fh Determine number of ATA and SCSI drives A0h Set time of day A2h Check key lock A4h Initialize Typematic rate A8h Erase F2 prompt AAh Scan for F2 key stroke ACh Enter SETUP AEH B0h Check for errors B2h DORS done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B9h Prepare Boot BAH Initialize PNP Option ROMs BCH	97h		Fixup Multi Processor table
9Ah Shadow option ROMs 9Ch Set up Power Management 9Dh Initialize security engine (optional) 9Eh Enable hardware interrupts 9Fh Determine number of ATA and SCSI drives A0h Set time of day A2h Check key lock A4h Initialize Typematic rate A8h Erase F2 prompt AAh Scan for F2 key stroke ACh Enter SETUP AEh Clear Boot flag B0h Check for errors B2h POST done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B7h Initialize DMI parameters B8h Initialize DMI parameters B8h Display MultiBoot menu BEH Clear screen (optional) B7h Check virus and backup reminders C0h Try to boot with INT 19 B7h Check virus and backup reminders C1h Initialize POST Error Manager (PEM) C1h Initialize prov Initialize	98h	1-2	
9Ch   Set up Power Management   9Dh   Initialize security engine (optional)   9Eh   Enable hardware interrupts   9Fh   Determine number of ATA and SCSI drives   A0h   Set time of day   A2h   Check key lock   A4h   Initialize Typematic rate   A8h   Erase F2 prompt   AAh   Scan for F2 key stroke   ACh   Enter SETUP   AEh   Clear Boot flag   B0h   POST done- prepare to boot operating system   B4h   1   One short beep before boot   B5h   Terminate QuietBoot (optional)   B6h   Check password (optional)   B7h   Initialize PNP Option ROMs   B8h   Initialize PNP Option ROMs   B8h   Clear sparity checkers   B9h   Clear sparity checkers   B9h   Clear sparity checkers   B9h   Clear sparity checkers   B9h   Display MultiBoot menu   B6h   Clear sparity checkers   B9h   Initialize PNP Option ROMs   CCheck virus and backup reminders   COh   Try to boot with INT 19   C1h   Initialize post Error Manager (PEM)   C2h   Initialize post Error Manager (PEM)   C3h   Initialize post Error Manager (PEM)   C6h   Initialize post Goothood ocking late   C6h   Initialize notebook docking (optional)   C7h   Initialize notebook docking late   C6h   Error Check (optional)   Extended checksum (optional)	99h		Check for SMART drive (optional)
9Dh   Initialize security engine (optional) 9Eh   Enable hardware interrupts 9Fh   Determine number of ATA and SCSI drives A0h   Set time of day A2h   Check key lock A4th   Initialize Typematic rate A8h   Erase F2 prompt AAh   Scan for F2 key stroke ACh   Enter SETUP AEh   Clear Boot flag B0h   Check for errors B2h   POST done- prepare to boot operating system B4h   1 One short beep before boot B5h   Terminate QuietBoot (optional) B6h   Check password (optional) B9h   Prepare Boot BAh   Initialize DMI parameters BBh   Initialize DMI parameters BDh   Display MultiBoot menu BEH   Clear screen (optional) BFh   Clear screen (optional) BFh   Check virus and backup reminders COh   Try to boot with INT 19 C1h   Initialize Error display function C4h   Initialize system error handler C5h   PnPnd dual CMOS (optional) Initialize notebook docking (optional) C7h   Initialize notebook docking (optional) C6h   PnPnd dual CMOS (optional) C6h   Initialize notebook docking (optional) C6h   Extended checksum (optional)	9Ah		Shadow option ROMs
9Eh       Enable hardware interrupts         9Fh       Determine number of ATA and SCSI drives         A0h       Set time of day         A2h       Check key lock         A4h       Initialize Typematic rate         A8h       Erase F2 prompt         AAh       Scan for F2 key stroke         ACh       Enter SETUP         AEh       Clear Boot flag         B0h       Check for errors         B2h       POST done- prepare to boot operating system         B4h       1       One short beep before boot         B5h       Terminate QuietBoot (optional)         B6h       Check password (optional)         B7h       Prepare Boot         BAh       Initialize DMI parameters         BBh       Initialize PnP Option ROMs         BCh       Clear parity checkers         BDh       Display MultiBoot menu         BEh       Clear screen (optional)         BFh       Check virus and backup reminders         C0h       Try to boot with INT 19         C1h       Initialize POST Error Manager (PEM)         C2h       Initialize error logging         C3h       Initialize system error handler         C5h       PnPnd dual CMOS (optional)	9Ch		Set up Power Management
9Fh       Determine number of ATA and SCSI drives         A0h       Set time of day         A2h       Check key lock         A4h       Initialize Typematic rate         A8h       Erase F2 prompt         AAh       Scan for F2 key stroke         ACh       Enter SETUP         AEh       Clear Boot flag         B0h       Check for errors         B2h       POST done- prepare to boot operating system         B4h       1       One short beep before boot         B5h       Terminate QuietBoot (optional)         B6h       Check password (optional)         B9h       Prepare Boot         BAh       Initialize DMI parameters         BBh       Initialize PnP Option ROMs         BCh       Clear parity checkers         BDh       Display MultiBoot menu         BEh       Clear screen (optional)         BFh       Check virus and backup reminders         C0h       Try to boot with INT 19         B1h       Initialize POST Error Manager (PEM)         C2h       Initialize error logging         C3h       Initialize error logging         C3h       Initialize error land CMOS (optional)         C4h       Initialize posteok docking (o	9Dh		Initialize security engine (optional)
A0h Check key lock A2h Check key lock A4h Initialize Typematic rate A8h Erase F2 prompt AAh Scan for F2 key stroke ACh Enter SETUP AEh Clear Boot flag B0h Check for errors B2h POST done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B7h Prepare Boot B8h Initialize DMI parameters B8h Initialize PNP Option ROMs B6h Clear parity checkers BDh Display MultiBoot menu BEH Clear screen (optional) BFH Check virus and backup reminders COh Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) Check Initialize error logging C3h Initialize error laglaty function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C7h Initialize notebook docking (optional) C7h Initialize notebook docking (optional) C7h Initialize notebook docking (optional) C8h Force check (optional) Extended checksum (optional)	9Eh		Enable hardware interrupts
A2h Check key lock  A4h Initialize Typematic rate  A8h Erase F2 prompt  AAh Scan for F2 key stroke  ACh Enter SETUP  AEh Clear Boot flag  B0h Check for errors  B2h POST done- prepare to boot operating system  B4h 1 One short beep before boot  B5h Terminate QuietBoot (optional)  B6h Check password (optional)  B7 P6 P7 P7 P7 P7 P7 P8 P8 P8 P8 P8 P8 P8 P8 P9	9Fh		Determine number of ATA and SCSI drives
A4th Initialize Typematic rate  A8th Erase F2 prompt  AAh Scan for F2 key stroke  ACh Enter SETUP  AEh Clear Boot flag  B0h Check for errors  B2h POST done- prepare to boot operating system  B4h 1 One short beep before boot  B5h Terminate QuietBoot (optional)  B6h Check password (optional)  B7h Prepare Boot  B8h Initialize DMI parameters  B8h Initialize PnP Option ROMs  BCh Clear parity checkers  BDh Display MultiBoot menu  BEH Clear screen (optional)  BFH Check virus and backup reminders  Coh Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  Extended checksum (optional)	A0h		Set time of day
A8h	A2h		Check key lock
AAh Scan for F2 key stroke ACh Enter SETUP AEh Clear Boot flag B0h Check for errors B2h POST done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B7h Prepare Boot B8h Initialize DNI parameters B8h Initialize PnP Option ROMs B7h Clear parity checkers B8h Display MultiBoot menu B8h Clear screen (optional) B7h Check virus and backup reminders C0h Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C1h Initialize pror Iogging C3h Initialize pror display function C4h Initialize pror display function C4h Initialize pror display function C6h Initialize notebook docking (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) Extended checksum (optional)	A4h		Initialize Typematic rate
ACh Enter SETUP  AEh Clear Boot flag  Boh Check for errors  B2h POST done- prepare to boot operating system  B4h 1 One short beep before boot  B5h Terminate QuietBoot (optional)  B6h Check password (optional)  B9h Prepare Boot  BAh Initialize DMI parameters  BBh Initialize PnP Option ROMs  BCh Clear parity checkers  BDh Display MultiBoot menu  BEH Clear screen (optional)  BFH Check virus and backup reminders  COh Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C7h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  Extended checksum (optional)	A8h		Erase F2 prompt
AEh Clear Boot flag  B0h Check for errors  B2h POST done- prepare to boot operating system  B4h 1 One short beep before boot  B5h Terminate QuietBoot (optional)  B6h Check password (optional)  B9h Prepare Boot  BAh Initialize DMI parameters  BBh Initialize PnP Option ROMs  BCh Clear parity checkers  BDh Display MultiBoot menu  BEH Clear screen (optional)  BFH Check virus and backup reminders  COh Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C7h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  Extended checksum (optional)	AAh		Scan for F2 key stroke
Boh Check for errors  B2h POST done- prepare to boot operating system  B4h 1 One short beep before boot  B5h Terminate QuietBoot (optional)  B6h Check password (optional)  B9h Prepare Boot  BAh Initialize DMI parameters  BBh Initialize PP Option ROMs  BCh Clear parity checkers  BDh Display MultiBoot menu  BEh Clear screen (optional)  BFh Check virus and backup reminders  Coh Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  Extended checksum (optional)	ACh		Enter SETUP
POST done- prepare to boot operating system B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B9h Prepare Boot BAh Initialize DMI parameters BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEH Clear screen (optional) BFH Check virus and backup reminders COh Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) Extended checksum (optional)	AEh		Clear Boot flag
B4h 1 One short beep before boot B5h Terminate QuietBoot (optional) B6h Check password (optional) B9h Prepare Boot BAh Initialize DMI parameters BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders Coh Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	B0h		Check for errors
B5h Terminate QuietBoot (optional) B6h Check password (optional) B9h Prepare Boot BAh Initialize DMI parameters BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders COh Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	B2h		POST done- prepare to boot operating system
B6h Check password (optional) B9h Prepare Boot BAh Initialize DMI parameters BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders Coh Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	B4h	1	One short beep before boot
B9h Prepare Boot  BAh Initialize DMI parameters  BBh Initialize PnP Option ROMs  BCh Clear parity checkers  BDh Display MultiBoot menu  BEh Clear screen (optional)  BFh Check virus and backup reminders  C0h Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  C9h Extended checksum (optional)	B5h		Terminate QuietBoot (optional)
BAh Initialize DMI parameters BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders C0h Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	B6h		Check password (optional)
BBh Initialize PnP Option ROMs BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders C0h Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	B9h		Prepare Boot
BCh Clear parity checkers BDh Display MultiBoot menu BEh Clear screen (optional) BFh Check virus and backup reminders C0h Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	BAh		Initialize DMI parameters
BDh Display MultiBoot menu  BEh Clear screen (optional)  BFh Check virus and backup reminders  C0h Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  C9h Extended checksum (optional)	BBh		Initialize PnP Option ROMs
BEh Clear screen (optional)  BFh Check virus and backup reminders  C0h Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  C9h Extended checksum (optional)	BCh		Clear parity checkers
BFh Check virus and backup reminders  C0h Try to boot with INT 19  C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  C9h Extended checksum (optional)	BDh		Display MultiBoot menu
C0h Try to boot with INT 19 C1h Initialize POST Error Manager (PEM) C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	BEh		Clear screen (optional)
C1h Initialize POST Error Manager (PEM)  C2h Initialize error logging  C3h Initialize error display function  C4h Initialize system error handler  C5h PnPnd dual CMOS (optional)  C6h Initialize notebook docking (optional)  C7h Initialize notebook docking late  C8h Force check (optional)  C9h Extended checksum (optional)	BFh		Check virus and backup reminders
C2h Initialize error logging C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C0h		Try to boot with INT 19
C3h Initialize error display function C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C1h		Initialize POST Error Manager (PEM)
C4h Initialize system error handler C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C2h		Initialize error logging
C5h PnPnd dual CMOS (optional) C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C3h		Initialize error display function
C6h Initialize notebook docking (optional) C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C4h		Initialize system error handler
C7h Initialize notebook docking late C8h Force check (optional) C9h Extended checksum (optional)	C5h		PnPnd dual CMOS (optional)
C8h Force check (optional) C9h Extended checksum (optional)	C6h		Initialize notebook docking (optional)
C9h Extended checksum (optional)	C7h		Initialize notebook docking late
	C8h		Force check (optional)
D2h Unknown interrupt	C9h		Extended checksum (optional)
	D2h		Unknown interrupt

Code	Beeps	For Boot Block in Flash ROM
E0h		Initialize the chipset
E1h		Initialize the bridge
E2h		Initialize the CPU
E3h		Initialize the system timer
E4h		Initialize system I/O
E5h		Check force recovery boot
E6h		Checksum BIOS ROM
E7h		Go to BIOS
E8h		Set Huge Segment
E9h		Initialize Multi Processor
EAh		Initialize OEM special code
EBh		Initialize PIC and DMA
ECh		Initialize Memory type
EDh		Initialize Memory size
EEh		Shadow Boot Block
EFh		System memory test
F0h		Initialize interrupt vectors
F1h		Initialize Run Time Clock
F2h		Initialize video
F3h		Initialize System Management Mode
F4h	1	Output one beep before boot
F5h		Boot to Mini DOS
F6h		Clear Huge Segment
F7h		Boot to Full DOS

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## Index of Symptom-to-FRU Error Message

## LCD-Related Symptoms

Symptom / Error	Action in Sequence
LCD backlight doesn't work	First, plug a monitor to CRT port. Next, enter BIOS utility to running "Load Default Settings" then reboot the system.
	Reconnect the LCD connectors.
	Keyboard (if the brightness function key doesn't work).
	LCD cable
	LCD inverter
	LCD
	Main board
LCD is too dark	Enter BIOS Utility to execute "Load Setup Default Settings", then
LCD brightness cannot be adjusted	reboot system.
	Reconnect the LCD connectors.
	Keyboard (if the brightness function key doesn't work).
	LCD cable
	LCD inverter
	LCD
	Main board
Unreadable LCD screen	Reconnect the LCD cable
Missing pels in characters	LCD cable
Abnormal screen	LCD
Wrong color displayed	Main board
LCD has extra horizontal or vertical lines displayed.	

### **Indicator-Related Symptoms**

Symptom / Error	Action in Sequence
Indicator incorrectly remains off or on, but system runs correctly	Main board
HDD/CD-ROM active indicators cannot work	HDD/CD-ROM drive
	Device driver
	Main board

### **Power-Related Symptoms**

Symptom / Error	Action in Sequence
Power shuts down during operation	Power source (battery pack and power adapter). See "Power System Check" on page 65.
	Battery pack
	AC adapter
	See if the thermal module is overheat (Heat sink or fan).
	Main board
The system cannot power-on.	Power source (battery pack and power adapter). See "Power System Check" on page 65.
	Battery pack
	Power adapter
	CPU
	Main board
The system cannot power-off.	In Windows XP operating system, hold and press the power switch for more than 4 seconds. If the system can power off, then the main board is OK. Verify OS in the HDD.  Main board

### **Power-Related Symptoms**

Symptom / Error	Action in Sequence
Battery can't be charged or discharged	See "Check the Battery Pack" on page 66.
	Battery pack
	Main board
System hang during POST	ODD/HDD/FDD/RAM module
	Main board

## **PCMCIA-Related Symptoms**

Symptom / Error	Action in Sequence
System cannot detect the PC Card (PCMCIA)	PCMCIA slot assembly
	Main board
PCMCIA slot pin is damaged.	PCMCIA slot assembly
PC Card cannot be inserted or ejected	Check if the PCMCIA slot is blocked
	Main board

### **Memory-Related Symptoms**

Symptom / Error	Action in Sequence
Memory count (size) appears different from actual size.	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot system.
	RAM module
	Main board
	Check BIOS revision
System can power on, but you hear two long	Reinsert DIMM
beeps: "B, B" and the LCD is blank.	DIMM
	Main board

### **Speaker-Related Symptoms**

Symptom / Error	Action in Sequence
In Windows, multimedia programs, no sound	OS volume control
comes from the computer.	Audio driver
	Speaker
	Main board
Internal speakers make noise or emit no sound.	Speaker
	Main board
Microphone cannot work	Audio driver
	Volume control in Windows XP
	Main board

### **Power Management-Related Symptoms**

Symptom / Error	Action in Sequence
The system will not enter hibernation mode	Power option in Windows XP
	Hard disk drive
	Main board
The system doesn't enter standby mode after	Driver of Power Option Properties
closing the lid of the portable computer.	Lid close switch in upper case
	Main board

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## **Power Management-Related Symptoms**

Symptom / Error	Action in Sequence
The system doesn't resume from hibernation/ standby mode.	Connect AC adapter then check if the system resumes from Standby/Hibernation mode.
	Check if the battery is low.
	Hard disk drive
	Main board
The system doesn't resume from standby mode	LCD cover switch
after opening the lid of the portable computer.	Main board
Battery fuel gauge in Windows doesn't go higher than 90%.	Refresh battery (continue use battery until power off, then charge battery).
	Battery pack
	Main board
System hangs intermittently.	Reconnect hard disk/CD-ROM drives.
	Main board

## **Peripheral-Related Symptoms**

Symptom / Error	Action in Sequence		
System configuration does not match the	Enter BIOS Setup Utility to execute "Load Setup defaults", then		
installed devices.	reboot system.		
	Reconnect hard disk/CD-ROM drives/FDD or other peripherals.		
	Main board		
External display does not work correctly.	Press Fn+F5, LCD/CRT/Both display switching		
	Keyboard		
	Main board		
USB does not work correctly	Main board		
Print problems.	Enter BIOS Setup Utility to execute "Load Default Settings" then		
	reboot the system.		
	Run printer self-test.		
	Printer driver		
	Printer cable		
	Printer		
	Main board		
Parallel port device problems	Enter BIOS Setup Utility to execute "Load Default Settings" then		
	reboot the system.		
	Device driver		
	Device cable		
	Device		
	Main board		

## **Keyboard/Touchpad-Related Symptoms**

Symptom / Error	Action in Sequence
Keyboard (one or more keys) does not work.	Reconnect the keyboard cable.
	Keyboard
	Main board
Touchpad does not work.	Reconnect touchpad cable.
	Touchpad board
	Main board

### Modem/LAN-Related Symptoms

Symptom / Error	Action in Sequence
Internal modem does not work correctly.	Phone cable Driver Reconnect the Internal modem cable to the main board tightly. Main board
Internal LAN does not work correctly	Lan cable Driver Main board

**NOTE:** If you cannot find a symptom or an error in this list and the problem remains, see "Undetermined Problems" on page 79.

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### **Intermittent Problems**

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, do the following:

- 1. Run the diagnostic test for the system board in loop mode at least 10 times.
- 2. If no error is detected, do not replace any FRU.
- 3. If any error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

#### **Undetermined Problems**

The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Follow these procedures to isolate the failing FRU (do not isolate non-defective FRU).

NOTE: Verify that all attached devices are supported by the computer.

**NOTE:** Verify that the power supply being used at the time of the failure is operating correctly. (See "Power System Check" on page 65):

- 1. Power-off the computer.
- 2. Visually check them for damage. If any problems are found, replace the FRU.
- 3. Remove or disconnect all of the following devices:

Non-Acer devices
Printer, mouse, and other external devices
Battery pack
Hard disk drive
DIMM
PC Cards

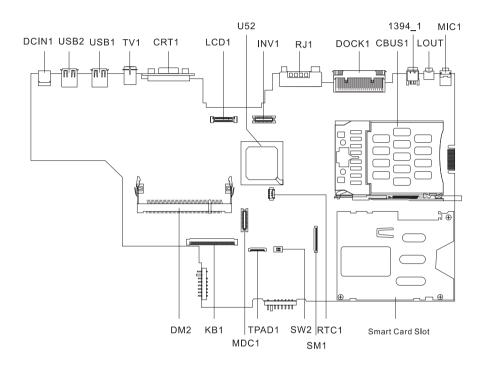
- 4. Power-on the computer.
- 5. Determine if the problem has changed.
- 6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
- 7. If the problem remains, replace the following FRU one at a time. Do not replace a non-defective FRU:

System boardLCD assembly

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# **Jumper and Connector Locations**

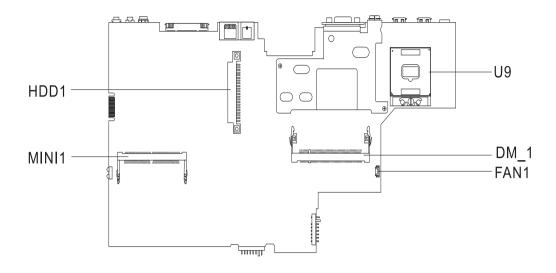
## **Top View**



DCIN1	DC-In Jack	1394_1	IEEE 1394 Port
USB2	USB Port	LOUT	Line-Out Jack
USB1	USB Port	MIC1	Mic-In Jack
TV1	S-Vedio Port	Smart Card Slot	Smart Card Reader Slot
CRT1	External Display Port	RTC1	RTC Battery Connector
LCD1	LCD Coaxial Cable Connector	SW1	Smart Card Connector
U52	South Bridge	SW2	SW2
INV1	Inverter Cable Connector	TPAD1	Touchpad Connector
RJ1	Modem Jack/LAN Jack	MDC2	MDC Board Connector
DOCK1	Expansion Port	KB1	Keyboard Connector
CBUS1	PCMCIA Slot	DM2	DIMM Socket 2

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## **Bottom View**



U9	CPU Socket	HDD1	Mini PCI Connector
DM_1	DIMM Socket 1	MINI1	HDD Connector
EAN11	EAN Connector		

## **Switch Setting**

	SW2-1	SW2-2
CHKPW	ON	X
BOOTBLOCK ENABLE	Х	ON

## FRU (Field Replaceable Unit) List

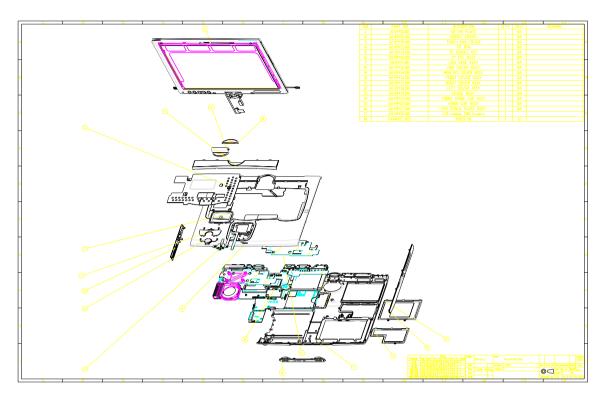
This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of TravelMate C300 series products. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

**NOTE:** To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

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## **Exploded Diagram**



**NOTE:** The part numbers on the exploded diagram are vendor part numbers, not Acer part numbers. Please refer to the most up-to-date spare part list for the correct part numbers as you order the parts.

Picture	No.	Partname And Description	Part Number	
Adapter				
	NS	ADAPTER 19V 70W 3PIN DELTA ADP-65DB	25.10110.171	
Battery				
	NS	BATTERY PACK LI-ION 8CELL SANYO BTP-63D1		
		RTC BATTERY	23.T28V1.001	
Boards				

Picture	No.	Partname And Description	Part Number
		EXTENSION BOARD	55.T28V1.001
		MODEM BOARD AMBIT T60M283.10(01)	54.09011.544
		MODEM/BLUETOOTH BOARD AMBIT T60M665.00	54.09061.001
		WIRELESS LAN BOARD 802.11B INTEL CALEXICO WM3B2100	KI.CAX01.002
Cables			I.
	6	TOUCHPAD CABLE	50.T28V1.001
	NS	POWER CORD 10A 125V KINGCORD US	27.T30V1.001
	NS	CORD 10A 250V K50081H5183BE(I)	27.T30V1.004
	NS	MODEM CABLE 96MM	50.T28V1.002
	NS	LED CABLE	50.T28V1.009
Case/Cover/Bracket Asser		<u> </u>	1
	2	MIDDLE COVER	42.T28V1.001
	15	HINGE CAP BACK	42.T28V1.002
	14	HINGE CAP FRONT	42.T28V1.003

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Picture	No.	Partname And Description	Part Number
	9	MINI PCI COVER W/SCREW	42.T28V1.004
	10	LOWER CASE FRONT COVER W/SPEAKER PACK	60.T28V1.003
	12	LOWER CASE LEFT COVER POWER SWITCH SIDE	60.T28V1.004
	11	LOWER CASE RIGHT COVER SMART CARD/ PCMCIA SIDE	60.T28V1.005
	8	HDD COVER W/SCREW	42.T28V1.005
	NS	HDD HOLDER	33.T28V1.001
	13	UPPER CASE W/LATCH MODULE & TOUCHPAD MODULE  Note: The image here contains touchpad cable only.	60.T28V1.001
	3	TOUCHPAD HOLDER	42.T28V1.006
	7	LOWER CASE W/DIMM COVER & RUBBER FOOT	60.T28V1.002

Picture	No.	Partname And Description	Part Number
	NS	DIMM COVER	42.T28V1.007
(9.5)			
	1	KEYBOARD SUPPORT PLATE	60.T28V1.010
1			
11			
1			
Communication Module	ı		1
	NS	BLUETOOTH ANTENNA	50.T28V1.003
	NS	WIRELESS LAN ANTENNA AUX	50.T28V1.004
	NS	WIRELESS LAN ANTENNA MAIN	50.T28V1.005
1			
CPU			
	NS	CPU BANIAS 1.7GMHZ 1MB INTEL	KC.BS001.17G
		CPU BANIAS 1.6GMHZ 1MB INTEL	KC.BS001.16G
		CPU BANIAS 1.5GMHZ 1MB INTEL	KC.BS001.15G
		CPU BANIAS 1.4GMHZ 1MB INTEL	KC.BS001.14G
		CPU BANIAS 1.3GMHZ 1MB INTEL	KC.BS001.13G
		CPU DOTHAN 1.8GMHZ INTEL	
FDD Module			
	NS	EXTENTION FDD MODULE USB YEDATA YD-	
		8U10 REV.HL	
Card Reader	Iua	I	1, 0 =0.0= 00.4
	NS	5 IN 1 MEMORY CARD READER MODULE	LC.T3405.001
	NS	5-IN-1 MEMORY CARD READER BOARD	55.T34V5.005
	NS	CARD READER HOLDER	60.T34V5.004
	NS	CARD READER COVER	33.T34V5.005
	NS	CARD READER BRACKET ASSEMBLY	33.T34V5.006
	NS	MEMORY CARD READER FFC CABLE	50.T34V5.008

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Picture	No.	Partname And Description	Part Number
HDD/ Hard Disk Drive			
	NS	HDD DRIVE 60G HGST IC25N060ATMR04	KH.06007.002
		HDD DRIVE 20G HGST IC25N020ATMR04	KH.02007.002
		HDD DRIVE 30G HGST IC25N030ATMR04	KH.03007.002
al.		HDD DRIVE 40G HGST IC25N040ATMR04	KH.04007.004
		HDD DRIVE 60G HGST TS548060M9AT00	KH.06007.003
		HDD DRIVE 80G HGST IC25N080ATMR04	KH.08007.002
		HDD DRIVE 30G TOSHIBA MK3021GAS	KH.33004.001
		HDD DRIVE 40G TOSHIBA MK4021GAS ACER	KH.34004.001
		HDD DRIVE 80G TOSHIBA MK8025GAS KA023A	KH.08004.001
		HDD DRIVE 60G TOSHIBA	KH.06004.001
		HDD DRIVE 40G FUJITSU V-40 MHT2040AT	KH.04006.002
		HDD DRIVE 60G MHT2060AT F/W:002E	KH.04006.003
		HDD DRIVE 60G TOSHIBA MK6021GAS	KH.36004.001
	NS	HDD HOLDER	33.T28V1.001
	8	HDD COVER W/SCREW	42.T28V1.005
Keyboard	ı		
	NS	KEYBOARD 84 KEY DARFON NSK-A4001 US	
		KEYBOARD DARFON NSK-A4002 TAIWAN	
		KEYBOARD ITALIAN	
E Little Britain		KEYBOARD GERMAN	
		KEYBOARD GERMAN	
		KEYBOARD SPANISH	
LCD	1	1	ı
	17	ASSY LCD MODULE 14.1" XGA CHIMEI N141X9-L01	6M.T28V1.006
		LCD MODULE 14.1" XGA AU B141XG08 V.2	6M.T28V1.007
	NS	LCD ASSEMBLY 14.1" XGA CHIME N141X9- L01 W/PROTECTION COVER & SPONGE	
		LCD ASSEMBLY 14.1" XGA AU B141XG08 V.2 W/PROTECTION COVER & SPONGE	
	NS	INVERTER BOARD 14.1" AMBIT	19.T28V1.001
		L	<u> </u>

Picture	No.	Partname And Description	Part Number
	NS	BUTTON BOARD	55.T28V1.003
ATTENDED TO			
	NS	LED BOARD	55.T28V1.004
THE CALL PROPERTY OF THE PARTY			
The state of the s			
	NS	LCD COAXIAL CABLE 14.1"	50.T28V1.006
200		LCD COAXIAL CABLE 14.1"	50.T28V1.008
4			
*	NC	INVERTED CARLE	50 T20\/4 007
4	NS	INVERTER CABLE	50.T28V1.007
	NS	DIGITIZER TOUCHPAD PANEL FOR 14.1 IN.	56.T33V1.001
		WACOM SU-015	
	NS	LCD BEZEL W/ICON LABEL & NAME PLATE & WIRELESS LAN ANTENNA	60.T28V1.007
	NS	LCD PANEL W/ANTENNA & HINGE & LOGO	60.T28V1.008
=	CNI	LOD FAINEL WAINTEININA & MINGE & LOGO	00.12071.000
220			
	NS	HINGE ASSEMBLY	33.T28V1.005
Main Board			
	18	MAINBOARD W/O CPU W/PCMCIA SLOT & RTC BATTERY & SMART CARD SLOT &	
		THERMAL PLATE	
A STATE OF THE STA			
	NS	PCMCIA SLOT	22.T28V1.001
	1.10	1 3.1.01/10201	22.12071.001

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Picture	No.	Partname And Description	Part Number
	NS	SMART CARD SLOT	22.T28V1.002
Memory			
	NS	SDIMM 512M INFINEON	KN.51202.007
		SDIMM 128M NANYA	KN.12803.008
		SDIMM 256M INFINEON	KN.25602.009
		SODIMM 256M NANYA	KN.25603.009
		SDIMM 256M ELPIDA	KN.25609.002
		SODIMM 512M MICRON	KN.25604.009
		SDIMM 512M ELPIDA	KN.51209.002
		SODIMM 512M MICRON	KN.51204.006
		SODIMM 512M NANYA	KN.51203.005
		SODIMM 1GB ELPIDA	TBD
Optical Drive/Combo Modu	le	1	
	NS	CDRW/DVD COMBO MODULE 24X QSI SBW-	6M.T28V1.001
4	110	242U	OW. 120 V 1.00 T
		COMBO MODULE 24X SONY CRX830E C	6M.T28V1.002
		DVD-ROM MODULE 8X MKE SR-8177	6M.T28V1.003
A.S.		DVD-ROM MODULE 8X LITEON XJ-SD081D	6M.T28V1.004
		DVD-RW MODULE 2X DUE PIONEER DVR- K12D	6M.T28V1.005
	NS	CDRW/DVD COMBO DRIVE 24X QSI SBW- 242U	
		COMBO DRIVE 24X SONY CRX830E C	
		DVD-ROM DRIVE 8X MKE SR-8177	
		DVD-ROM DRIVE 8X LITEON XJ-SD081D	
		DVD-RW DRIVE 2X DUE PIONEER DVR-K12D	
	NS	OPTICAL BRACKET	33.T28V1.002
•	NS	OPTICAL DEVICE BOARD	55.T28V1.002
Pointing Device		1	<u>I</u>
	NS	TOUCHPAD SYNAPTICS TM41P-341	56.T28V1.001

Picture	No.	Partname And Description	Part Number
Heatsink/FAN			
	NS	CPU FANSINK W/FAN	60.T28V1.006
•			
	NS	FAN	23.T28V1.002
		I AIV	23.12071.002
	NO	LIFATOINIK	04 T00)/4 004
	NS	HEATSINK	34.T28V1.001
Microphone	luo	Lucacana	Too Too! (4 000
	NS	MICROPHONE	23.T28V1.003
No.			
Others			
Others	luo	LIAME DI ATE	10 T00 // CC /
	NS	NAME PLATE	40.T28V1.001
	NS	ICON PLATE	40.T28V1.002
	NS	LOGO PLATE	31.48R18.001
	NS	RUBBER FOOT	47.T30V1.003
	NS	LCD SCREW MYLAR LOWER	47.T28V1.001
•			
	NS	LCD SCREW MYLAR UPPER	47.T28V1.002
•			
	NS	LCD LATCH MODULE	60 T20)/4 000
	5	TOUCHPAD SCROLL KEY	60.T28V1.009 42.T28V1.008
967	3	TOUCHPAD SCROLL REY	42.120 1.000
	4	TOUCHPAD BUTTON	42.T28V1.009
700			
Screws			
COLGANO		SCRW HEX NUT W/WASHER #4 NI BT)	34.00015.211
		SCREW M2X4 (HEAD 0.3) NYLOK	86.00A23.320
		SCREW M2X4 (HEAD 0.5) NYLOK	86.00A55.320
		SCREW M2.5X6	86.9A353.6R0
		SCREW M3x4(86.9A524.4R0)	86.9A524.4R0
		· · · · · · · · · · · · · · · · · · ·	
		SCRW M2*4 WAFER NI	86.9A552.4R0
		SCRW MAC PAN M2*L9.3NI NYL SPR	86.T28V1.003
		SCREW M2*3 NYLON 1JMCPC-420325	86.9A352.3R0
	j	SCREW MACH WAFER M2*6L BK-ZN	86.9A352.6R0

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Picture	No.	Partname And Description	Part Number
		SCREW MACH WAFER M2*L3.1 Y-ZN	86.T28V1.004
		SCREW M2 X L8 (DIA 6MM)	86.T28V1.005
		SCRW MACH WAFER M2*L8 NI S NOT	86.T28V1.006
		SCREW NYLOK M2.5-5	86.9A553.5R0
		SCRW M1.7*5.5 TAPPING NI	86.T28V1.007

Chapter 6 93

# Model Definition and Configuration

## TravelMate C300 Series

Model Number	CPU	LCD	Memory	HDD (GB)	ODD	Wireless LAN	MDC
300XCi	P-M 1.4G	14.1XGA	1X256 2x256M	30/40	24x DVD+CD- RW	11b	Combo
301XCi	PM-1.4G PM-1.5G	14.1XGA	2X256 1X512	40/60	24x DVD+CD- RW	11b	N
302XMi	PM-1.6G	14.1XGA	2x256M	60	DVD-Dual	11b	Combo

Appendix A 94

## **Test Compatible Components**

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows<sup>®</sup> XP Home, Windows<sup>®</sup> XP Pro and Windows<sup>®</sup> 2000 environment.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the TravelMate C300 series Compatibility Test Report released by the Acer Mobile System Testing Department.

# Microsoft® Windows® XP Pro Environment Test

Item	Specifications
LAN Card	3Com EtherLink III
	IBM EtherJet CardBus Adapter 10/100
	Intel EtherExpress Pro/100 Mobile Adapter
	Xircom CardBus Ethernet 10/100 32Bitr
Modem Card	USR Megahertz 56K PC Card Modem
	Xircom CreditCard Modem 56
	IBM 56K Double Jack Modem
Combo Card	3Com Megahertz 10/100LAN+Modem 56
	Xircom RealPort CardBus Ethernet 10/100+ Modem 56
ATA Card	IBM Microdrive 340MB
	IBM Microdrive 1G
	Iomega Click! 40MB
	Sony Memory Stick 64MB
	Sandisk Compact Flash Card 20MB
	Apacer SD Flash Card 128MB
	Apacer 128MB Memory Stick
USB 2.0 Card	Apricorn EZ-USB 2.0 Cardbus PC Card
	DTK USB 2.0 2Port CardBus Host Controller
	Adaptec USB2CONNECT
1394	Buffalo 1394 Interface Cardbus
	I-O Data 1394 Interface Cardbus
	Pixela 1394 Card PC Card
SCSI Card	Adaptec 1480A or B SCSI CB
	NewMedia Bus Toaster SCSI II
Wireless LAN Card	Intel Pro/Wireless LAN PC Card
	Proxim Skyline 802.11a Cardbus Card
	Cisco Aironet 350 series Wireless LAN Card
	NeWeb Wireless LAN Card 802.11b
	Cisco Wireless LAN Card 802.11a
Bluetooth Card	IBM Community Bluetooth PC Card
	Toshiba Bluetooth PC Card
ISDN Card	US Robotics Megahertz 128K ISDN Card
Token Ring Card	IBM Token Ring 16/4 Adapter II
External CRT	Acer 211c 21"
	ViewSonic PF790 19"
	Acer FP751 17" TFT LCD
	IBM Color TFT LCD 14"
	Compaq Color Monitor V70
	NEC Color Monitor 20"
	Mozo 17" TFT LCD (DVI)
Projector	NEC MultiSync MT-1040
Legacy (Parallel) Printer / Scanner	Canon BJC-600J
	Epson Stylus Color 740 Parallel interface
	HP DeskJet 890C
	HP DeskJet 880C Parallel interface
	HP LaserJet 6MP
	HP LaserJet 6MP HP LaserJet 2200
IR Printer	

Item	Specifications
USB Keyboard / Mouse	Chicony USB Keyboard
	Chicony USB Keypad
	Microsoft Natural Keyboard Pro
	Acer Aspire USB Mouse
	Logicool USB Mouse
	Logitech Coreless MouseMan Wheel USB interface
	Logitech USB Wheel Mouse
	Microsoft IntelliMouse Optical USB interface
USB Printer / Scanner	Epson Stylus Color 740 USB interface
	HP DeskJet 880C USB interface
	HP ScanJet 3300C Color Scanner
	JS USB Digital Speaker
	Panasonic USB Speaker EAB-MPC57USB
	Aiwa Nultimedia Digital Speaker
	Microsoft SideWinder Precision Pro Joystick
	Logitech WingMan RumblePad
USB Camera	Intel Easy PC Camera
	Logitech QuickCam Express Internet
	Logitech QuickCam Home PC Video Camera
	Orange Micro USB 2.0 WebCam
USB Storage Drive	Logitech CDRW + DVDROM combo USB interface
See storage 2e	Iomega USB Zip 250MB
	Plextor Burn-Proof CDRW (USB 2.0)
	Fujitsu MO-1300 1.3G (USB 2.0)
	Fujitsu 20G HDD (USB 2.0)
	Sony DVDROM (USB 2.0)
	IO-Data DVDROM (USB 2.0)
	Sandisk Card Reader 6 In 1 (USB 2.0)
USB Flash Drive	Apacer USB Handy Drive32/128MB
	Apacer USB Handy Drive 256/512MB
	Sony Memory Key 128MB
	Dell Memory Key 64MB
USB Floppy Drive	Acer YE-Data USB Floppy Drive
USB Hub and Others	Belkin 4 Port USB Hub
	Eizo I Station USB Hub
	Elecom USB Hub 4 Port
	Sanwa USB Hub 4 Port
	Sanwa 4 Port Hub (USB 2.0)
	Corega WirelessLAN USB Stick (USB 1.1) *1
Bluetooth Printer	HP Deskjet 995C (bluetooth interface)
Access Point 802.11b	Hitachi DC-CN3300
	Lucent RG-1000
	Lucent WavePoint-II
	Cisco Aironet 350
	Orinoco AP-500
Access Point 802.11a/b	Intel Dual Pro/Wireless 5000
Access Point 802.11a	Intel Pro/Wireless 5000
ACCESS FUIII OUZ. I Id	HINGI FTO/WHITEIESS DUUU

# Microsoft® Windows® XP Home Environment Test

Item	Specifications
LAN Card	3Com EtherLink III
	IBM EtherJet CardBus Adapter 10/100
	Intel EtherExpress Pro/100 Mobile Adapte
	Xircom CardBus Ethernet 10/100 32Bitr
Modem Card	USR Megahertz 56K PC Card Modem
	Xircom CreditCard Modem 56
	IBM 56K Double Jack Modem
Combo Card	3Com Megahertz 10/100LAN+Modem 56
	Xircom RealPort CardBus Ethernet 10/100+ Modem 56
ATA Card	IBM Microdrive 340MB
	IBM Microdrive 1G
	Iomega Click! 40MB
	Sony Memory Stick 64MB
	Sandisk Compact Flash Card 20MB
	Apacer SD Flash Card 128MB
	Apacer 128MB Memory Stick
USB 2.0 Card	Apricorn EZ-USB 2.0 Cardbus PC Card
	DTK USB 2.0 2Port CardBus Host Controller
	Adaptec USB2CONNECT
1394	Buffalo 1394 Interface Cardbus
	I-O Data 1394 Interface Cardbus
	Pixela 1394 Card PC Card
SCSI Card	Adaptec 1480A or B SCSI CB
	NewMedia Bus Toaster SCSI II
Wireless LAN Card	Intel Pro/Wireless LAN PC Card
	Proxim Skyline 802.11a Cardbus Card
	Cisco Aironet 350 series Wireless LAN Card
	NeWeb Wireless LAN Card 802.11b
	Cisco Wireless LAN Card 802.11a
Bluetooth Card	IBM Community Bluetooth PC Card
	Toshiba Bluetooth PC Card
ISDN Card	US Robotics Megahertz 128K ISDN Card
Token Ring Card	IBM Token Ring 16/4 Adapter II
External CRT	Acer 211c 21"
	ViewSonic PF790 19"
	Acer FP751 17" TFT LCD
	IBM Color TFT LCD 14"
	Compaq Color Monitor V70
	NEC Color Monitor 20"
	Mozo 17" TFT LCD (DVI)
Projector	NEC MultiSync MT-1040
Legacy (Parallel) Printer / Scanner	Canon BJC-600J
	Epson Stylus Color 740 Parallel interface
	HP DeskJet 890C
	HP DeskJet 880C Parallel interface
	HP LaserJet 6MP
ID D : 4	HP LaserJet 2200
IR Printer	HP LaserJet 6MP use IR
	HP LaserJet 2200 use IR

USB Keyboard / Mouse  Chicony USB Keyboard Chicony USB Keypad Microsoft Natural Keyboard Pro Acer Aspire USB Mouse Logicool USB Mouse Logitech Coreless MouseMan Wheel USB interface Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Microsoft Natural Keyboard Pro Acer Aspire USB Mouse Logicool USB Mouse Logitech Coreless MouseMan Wheel USB interface Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Acer Aspire USB Mouse Logicool USB Mouse Logitech Coreless MouseMan Wheel USB interface Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera
Logicool USB Mouse Logitech Coreless MouseMan Wheel USB interface Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera
Logitech Coreless MouseMan Wheel USB interface Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Logitech USB Wheel Mouse Microsoft IntelliMouse Optical USB interface  USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Microsoft IntelliMouse Optical USB interface  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Microsoft Camera
USB Printer / Scanner  Epson Stylus Color 740 USB interface HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
HP ScanJet 3300C Color Scanner  JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
JS USB Digital Speaker Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Panasonic USB Speaker EAB-MPC57USB Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Aiwa Nultimedia Digital Speaker Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Microsoft SideWinder Precision Pro Joystick Logitech WingMan RumblePad  USB Camera  Intel Easy PC Camera
Logitech WingMan RumblePad  USB Camera Intel Easy PC Camera
USB Camera Intel Easy PC Camera
·
1 11 10 110 -
Logitech QuickCam Express Internet
Logitech QuickCam Home PC Video Camera
Orange Micro USB 2.0 WebCam
USB Storage Drive Logitech CDRW + DVDROM combo USB interface
Iomega USB Zip 250MB
Plextor Burn-Proof CDRW (USB 2.0)
Fujitsu MO-1300 1.3G (USB 2.0)
Fujitsu 20G HDD (USB 2.0)
Sony DVDROM (USB 2.0)
IO-Data DVDROM (USB 2.0)
Sandisk Card Reader 6 In 1 (USB 2.0)
USB Flash Drive Apacer USB Handy Drive32/128MB
Apacer USB Handy Drive 256/512MB
Sony Memory Key 128MB
Dell Memory Key 64MB
USB Floppy Drive Acer YE-Data USB Floppy Drive
USB Hub and Others Belkin 4 Port USB Hub
Eizo I Station USB Hub
Elecom USB Hub 4 Port
Sanwa USB Hub 4 Port
Sanwa 4 Port Hub (USB 2.0)
Corega WirelessLAN USB Stick (USB 1.1) *1
Bluetooth Printer HP Deskjet 995C (bluetooth interface)
Access Point 802.11b Hitachi DC-CN3300
Lucent RG-1000
Lucent WavePoint-II
Cisco Aironet 350
Orinoco AP-500
Access Point 802.11a/b Intel Dual Pro/Wireless 5000
Access Point 802.11a Intel Pro/Wireless 5000

# Microsoft® Windows® 2000 Environment Test

Item	Specifications		
LAN Card	IBM EtherJet CardBus Adapter 10/100		
Modem Card	USR Megahertz 56K PC Card Modem		
	Xircom CreditCard Modem 56		
	IBM 56K Double Jack Modem		
Combo Card	Xircom RealPort CardBus Ethernet 10/100+ Modem 56		
ATA Card	IBM Microdrive 340MB		
	Iomega Click! 40MB		
	Apacer SD Flash Card 128MB		
	Apacer 128MB Memory Stick		
USB 2.0 Card	Adaptec USB2CONNECT		
1394	Buffalo 1394 Interface Cardbus		
	I-O Data 1394 Interface Cardbus		
	Pixela 1394 Card PC Card		
SCSI Card	Adaptec 1480A or B SCSI CB		
Wireless LAN Card	Intel Pro/Wireless LAN PC Card		
Bluetooth Card	IBM Community Bluetooth PC Card		
Token Ring Card	IBM Token Ring 16/4 Adapter II		
External CRT	ViewSonic PF790 19"		
	Acer FP751 17" TFT LCD		
	NEC Color Monitor 20"		
Projector	NEC MultiSync MT-1040		
Legacy (Parallel) Printer / Scanner	Epson Stylus Color 740 Parallel interface		
	HP DeskJet 880C Parallel interface		
	HP LaserJet 2200		
IR Printer	HP LaserJet 6MP use IR		
	HP LaserJet 2200 use IR		
USB Keyboard / Mouse	Chicony USB Keyboard		
	Microsoft Natural Keyboard Pro		
	Acer Aspire USB Mouse		
	Logitech Coreless MouseMan Wheel USB interface		
1100 0 1 10	Logitech USB Wheel Mouse		
USB Priinter / Scanner	HP DeskJet 880C USB interface HP ScanJet 3300C Color Scanner		
	Panasonic USB Speaker EAB-MPC57USB  Logitech WingMan RumblePad		
LICE Comore			
USB Camera	Logitech QuickCam Home PC Video Camera Orange Micro USB 2.0 WebCam		
USB Storage Drive	Plextor Burn-Proof CDRW (USB 2.0)		
OOD Glorage Drive	Fujitsu 20G HDD (USB 2.0)		
	Sony DVDROM (USB 2.0)		
	Sandisk Card Reader 6 In 1 (USB 2.0)		
USB Flash Drive	Apacer USB Handy Drive32/128MB		
-	Apacer USB Handy Drive 256/512MB		
	Sony Memory Key 128MB		
USB Floppy Drive	Acer YE-Data USB Floppy Drive		
USB Hub and Others	Eizo I Station USB Hub		
	Sanwa 4 Port Hub (USB 2.0)		

Item	Specifications	
Bluetooth Printer	HP Deskjet 995C (bluetooth interface)	
Access Point 802.11b	Cisco Aironet 350 Orinoco AP-500	
Access Point 802.11a/b	Intel Dual Pro/Wireless 5000	
Access Point 802.11a	Intel Pro/Wireless 5000	

## Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

0011011110	acio molading.		
	Service guides for all models		
	User's manuals		
	Training materials		
	Bios updates		
	Software utilities		
	Spare parts lists		
	TABs (Technical Announcement Bulletin)		
For these technical r	purposes, we have included an Acrobat File to facilitate the problem-free downloading of our naterial.		
Also contained on this website are:			
	Detailed information on Acer's International Traveler's Warranty (ITW)		
	Returned material authorization procedures		
	An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.		
We are always looking for ways to optimize and improve our services, so if you have any suggestions or			

comments, please do not hesitate to communicate these to us.

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